ANNUAL REPORT

OF THE

CENTRAL METEOROLOGICAL OBSERVATORY

OF JAPAN

FOR

THE YEAR 1897.

PART II.

F. OBSERVATIONS ON TERRESTRIAL MAGNETISM AND ATMOSPHERIC ELECTRICITY.

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MAGNETIC OBSERVATIONS

FOR

THE YEAR 1897.

1. MAGNETIC OBSERVATORY.

It is placed within the circle of the Central Meteorological Observatory at the altitude 21m. above the sea-level. Its geographical co-ordinates are

Longitude 139° 45′ E
Latitude 35° 41′ N

The observatory had been established in 1890. It was rebuilt in July, 1897. It is wooden building, of which every precaution was taken to avoid the use of iron-articles, all nails being made of copper. The observation rooms are taken under the ground. There are two rooms, with the stair case running in the N-S direction between them. In the eastern there is set a Mascart's self-registering magnetograph, and in the western the apparatus for the direct reading.

2. ABSOLUTE MEASUREMENT OF MAGNETIC ELEMENTS.

Absolute measurement is made once every month, the horizontal intensity and the dip being generally observed three or four times and the declination in such a number that it is sufficient to obtain a curve of diurnal variation.

The declination and the horizontal intensity are measured by means of the instrument constructed by Prof. Tanakadate, which is described in a paper published in the Proceeding of the Royal Society of Edinburgh (1884-6) and also in the Journal of the college of Science, Imperial University, Japan (Vol. II., Part III.). It will be sufficient here to give a short description which is chiefly the extraction of the papers.

Declination.—The declinometer is built upon a theodolite which in its ordinary form serves for all the astronomical observations. The magnetometer stage resting on tripods is fitted to the centre of the theodolite base, being able to be fixed either to the base of the theodolite or to the Y's by means of a screw projected downward from the centre of the base of the stage. A telescope with a mirror and a lamp are fixed to the stage.

The magnetometer case is set upon the stage and can be levelled by four screws at the upper surface of the stage and centered by other four screws at its vertical sides. The magnet is a small hollow cylinder piercing a mirror centrally perpendicular to its plane. Mirror and magnet are

fastened to an aluminium stem, whose lower end is broadened, so that it may, when necessary, be securely gripped by means of a vice fitted to the lower part of the case. The suspension is made by means of a spider line.

The peculiar feature of the declinometer is a coil of wire, wound on a flat rectangular frame of brass in two separate parts, a certain portion in the middle being left vacant. Two pivots project from the middle of the sides in a direction perpendicular to the axis of the coil. These pivots are hollow, and are made of the same external diameter as those of the telescope belonging to the theodolite. The upper and lower surfaces are pierced so as to allow the magnetometer to project above the coil

To bring the coil into adjustment, it is necessary to operate as follows. Place the stage and magnetometer on the theodolite, and mount the coil with its pivots resting on the Y's. Adjust the Y's into an approximate east and west direction by sighting the freely hanging mirror edge-on through the pivot cores. Lay the coil horizontal, so that the ends of the coil now face north and south. Adjust the centering of the magnetometer and place the small telescope with attached scale and lamp-counterpoise in due position. Clamp the stage and all its bearings to the base of theodolite, thus rendering them quite free of the Y's and consequently the coil being able to be turned round independent of every thing else. The magnetometer stage is adjusted until some convenient division on the scale, as reflected from the magnet mirror, is brought to coincidence with the cross-wire of the observing telescope. Thus all things are prepared.

The coil is now put in circuit with a small dry battery. This is done by communicating it with the resistance box, whose terminals are joined to the poles of the battery and which enables to change the direction of the current. At the first trial the direction of the current should be such as to make the magnetic field due to the current in the coil have the same (general) direction as that of the earth. This is readily judged of by the quickened movement of the magnet. The reflected image of the scale will in general be seen to move. With the current always on, let the azimuth of the coil be shifted until the originally observed reading of the scale is brought back again to the cross wires. Since the magnetometer and telescope have been absolutely fixed in position during the whole operation, this gives to the first approximation the direction of the declination. The current is now reversed. In general, the result of this will be that the image of the zero scale reading will slowly move to one or other side of the cross wire. The resistance in circuit is then adjusted until the current is such as to cause the time of oscillation of the magnet to be some three or four times as long as that under the earth's force alone. The original division of the scale is again brought back to the cross wire by carefully adjusting the azimuth of the coil. If the current is now broken and the scale image does not shift, it is certain that the magnetic axis of the coil lies in the magnetic meridian. The reading on the theodolite gives it azimuth. An exactly similar observation is made with the coil reversed as regards east and west. Next, two such observations must be made in overturning the coil up and down. The mean of the four readings gives the declination at that instant corresponding to the mean of the two instances of the first and the last adjustments, quite independent of any errors resulting from any (slight) deviation from perpendicurality between the axis of the pivots and the line of magnetic force at the centre of the coil due to the current in it and from any deviation of the centre of the coil from that of the magnet. A complete observation usually takes four or five minutes.

Horizontal Intensity.—For the determination of the horizontal intensity, the declinometer must be removed and in its place a deflection bar substituted. The bar is made of brass and has a V-

groove on its upper surface—or rather two V-grooves extending the one to the east and the other to the west, when the instrument is mounted ready for use. Where the bar rests on the Y's, it is made in the form of a semi-cylinder—the upper surface being flat, the lower having the same curvature as the pivots of the theodolite telescope and the declinometer coil. Between the Y's, the bar swells out into an oblate ring, through which the magnetometer projects. A semi-circular groove is cut in front of the ring, so that the magnet mirror can be sighted by the small telescope. On the V-groove of the bar there are four stops two on each side of the centre. The deflection magnet rests in the groove, and the stops are so placed that the two distances of the magnet from the centre are obtained simply by slipping the magnet along the groove from one stop to the other, without having to lift it out. The stops are placed so as to make the ratio of the two distances the best possible, according to the usual rule.

The instrument is obviously available for use either according to the method of sines or the method of tangents. The former method is the preferable one; and, in using it, it is necessary to clamp the stage to the Y's, and free it from the base of the theodolite. The operations are then conducted exactly as with the Kew instrument. The temperature of the bar is measured by means of two thermometers placed in its opposite sides beyond the further stops. It is advisable to dust with a small brush the surfaces of the magnet and stop just before they are brought together. The chronometer time is taken as the final deflection is adjusted. The beginning of the experiment is given by the first time record in the vibration experiment, which it was found most convenient to make first. The mean of these times is taken as the time corresponding to the value of the horizontal force as finally deduced.

The vibration experiment is made in a vibration box somewhat similar in construction to the one used in the Kew instrument. It is mounted on a second tripod, so that the magnetometer stage need never be removed until the theodolite has to be used for the astronomical observations. The magnet is suspended by two loops of silk from the end of a silk fibre freed from twist in the usual way and its horizontality is well adjusted. A horizontal vibration of about half a degree is given to the magnet, and it is observed by means of a telescope. The observer signals the instant of transit of the middle point of the swing, and these are noted down by the recorder at some distance. The temperature is observed at the biginning and the end of the experiment with a thermometer attached to the inside of the glass window of the box, the mean of two readings being taken as the temperature in the vibration experiment.

For determining the horizontal intensity all the necessary corrections are applied. The torsion and arc correction are applied in the usual way; the time correction is applied so as to reduce the time-unit at once to the mean solar second; besides these we may mention the corrections for induction, expansion of steel magnet and of the brass which constitutes V groove on which the magnet is to be placed in the deflection experiment, and the correction for the temperature difference in the vibration and the deflection experiments.

The vibration experiment is usually taken before the deflection experiment From the first recorded swing to the last deflection adjustment the whole experiment generally takes about 20 minutes.

Dip.—The observations of dip are made by means of a dip circle Cassela 17. The magnetization

of the needle is reversed by means of an electro-magnetic coil. A complete observation usually takes 20 minutes.

The astronomical meridian is sometimes determined by observations of circumpolar stars or of the sun. Thus, the azimuth of the top of a tower of a Cathedral Nicoli at a distance of about 1.5 k.m. is often tested. The reading of the meridian is usually reduced from that of the object.

3. PHOTOGRAPHIC RECORDS OF MAGNETIC ELEMENTS.

Photographic records of magnetic elements are made by means of a Mascart's magnetograph. Let us shortly describe the arrangement of the instrument and the method of reduction.

THE ARRANGEMENT OF THE APPARATUS.

Declinometer.—It is contained in a metal case with a tube on its cover. From the upper end of the tube, a magnet with a mirror perpendicular to its direction is freely suspended by means of a fine silk thread. There is a second mirror fixed to the base of the case. Thus, the rays of light falling upon the two mirrors reflect on a photographic paper moving by a clock-work, one tracing the curve of variation of the direction of the magnetic needle and the other the fixed line.

Bifilar.—Its construction is similar to that of declinometer. But, in this case, the magnet with a mirror parallel to its direction is suspended by means of two fine silk threads and put in equilibrium in the direction perpendicular to the magnetic meridian in virtue of the couples due to the horizontal intensity and the torsion. Its sensibility can be adjusted by regulating the distance between the two points of suspension. The light reflected from the mirror traces the variation of the horizontal intensity.

Balance.—It is a magnetic balance with a hole in its central portion. There is, in the hole, a knife-edge, by means of which the magnet rests on an agate plane, and the magnet is placed horizontally by adjusting the position of its centre of gravity by means of a small index attached to it, the couple due to the vertical intensity equilibrating with that due to gravity. The sensibility can be adjusted by means of two weights movable in the horizontal and vertical ones attached to the magnet. The whole is contained in a metal case. There are two horizontal mirrors, one fixed to the case and the other to the magnet. At the central portion of the cover of the case, there is a hole on which an isosceles rectangular prism is placed, the two faces being, put horizontally and vertically. Thus, the light falling upon the vertical face of the prism is refracted towards the mirrors and again reflected and traces the variation of the vertical intensity and the zero line.

METHOD OF REDUCTION.

Declinometer.—By turning the case through a known small angle and measuring the deviation of reflected light from the fixed mirror, we can obtain the angular value for any ordinate of the curve, the effect of torsion being found to be negligible. The value for 1 m. m. was $1'.47$.

Bifilar.—Putting α the half sum of the deviations of declinometer, caused by a horizontal magnet in two positions, once N-pole to the east and the next to the west, and n that of deviations of bifilar when the same maget is placed, once its N-pole to the north and then to the south, we have the formula

$$\triangle H = \frac{H \tan \alpha}{n}$$

where $\triangle H$ denotes the variation of the horizontal magnetic intensity H for unit deviation.

Balance.—Putting I the dip, and m the half sum of the deviations of balance, caused by the magnet formerly used, when its N-pole is placed vertically upward and downward, we have the formula

$$\triangle Z = \frac{Z \tan \alpha \cot I}{m}$$

where $\triangle Z$ denotes the variation of the vertical magnetic intensity Z for unit deviation.

Their mean values for 1 m. m. in each month were as follows :—

	△ H (in C.G.S. units)	△ Z (in C.G.S. units)		△ H (in C.G.S. units)	△ Z (in C.G.S. units)
January	.0000591	.0001330	July............	.0000691	.0001304
February.........	.0000609	.0001249	August	.0000671	.0001827
March	.0000572	.0000902	September ...	.0000662	.0001268
April	.0000582	.0000820	October	.0000600	.0000977
May...	0000634	.0001332	November ...	.0000605	.0000793
June...	.0000690	.0002390	December ...	.0000604	.0001020

TEMPERATURE COEFFICIENTS OF BIFILAR AND BALANCE.

The temperature of the room where the photographic record is always made can not be constant, the range in a day sometimes amounting to nearly 1° C. Thus, the temperature-coefficients of the bifilar and the balance were determined on June 1, 1898. The method employed was to heat the room by burning the charcoal in suri-bachi (an earthen-ware), the fire being regulated by looking at the self-recording thermo-graph placed in the room, while the observation of the direct-reading system in the other room was made at the same moment when the temperature in the main room was observed. Six suri-bachi were distributed in the room, and the temperature was observed with the thermometers attached to the balance, the bifilar and the thermograph. Three simultaneous readings did not differ more than 0°.4 C, and the range of temperature during the experiment was about 2°. Eliminating the deviation due to the variations of magnetic elements by means of the observation of direct reading system, the following values of coefficients were obtained.

TEMPERATURE COEFFICIENT OF BIFILAR

Time	Temp. diff.	Deviation in m.m.	Deviation in m.m. for 1°.
$9^h\ 18^m$ a	0	0	—
11 08 ,,	9°.0	42.51	4.73
11 33 ,,	8.3	42.43	5.11
0 01 p	8.4	41.38	4.93
0 33 p	8.8	42.38	4.82
0 57 ,,	8.2	41.51	5.07
1 23 ,,	7.7	39.97	5.16
1 43 ,,	7.3	38.08	5.29
2 14 ,,	10.0	43.68	4.37
2 40 ,,	9.4	45.70	4.88
3 13 ,,	9.1	45.76	5.03
3 39 ,,	8.9	45.23	5.08
		mean	4.95

Thus the temperature coefficient in absolute value is

$$4.95 \times .00004183 = .0002073 \text{ C. G. S. units,}$$

.00004183 being the value for 1 m. m. during the experiment.

TEMPERATURE-COEFFICIENT OF BALANCE.

Time	Temp. diff.	Deviationd in m.m.	Deviation in m.m. for 1°.
$9^h\ 18^m$ a	0	0	—
11 08 „	8.6	33.03	3.84
11 33 „	8.4	33.53	3.99
0 01 p	8.3	32.44	3.91
0 33 „	8.6	37.27	4.34
0 57 „	8.4	37.17	4.42
1 23 „	8.1	35.57	4.39
1 43 „	7.6	33.42	4.40
2 14 „	9.9	34.92	3.53
2 40 „	9.3	40.27	4.33
3 13 „	9.1	39.44	4.33
3 39 „	8.9	38.47	4.32
		mean	4.16

Thus the coefficient in absolute value is

$$4.16 \times .00007319 = .0003045 \text{ C. G. S. units,}$$

.00007319 being the value for 1 m. m. during the experiment.

4. DIRECT READING SYSTEM.

The system is essentially the same as the self-recording magnetograph. By means of this system, the variations obtained by photographic records are often tested.

5. HARMONIC ANALYSIS OF DIURNAL VARIATION OF MAGNETIC ELEMENTS.

Expressing the mean of hourly values of magnetic elements for every month and the year by means of a formula

$$f(t) = p_0 + p_1 \cos t + q^1 \sin t + p_2 \cos 2t + q_2 \sin 2t + p_3 \cos 3t + q_3 \sin 3t$$
$$+ p_4 \cos 4t + q_4 \sin 4t,$$

the cœfficients p_0, p_1, q_1, p_2, q_2, p_3, q_3, p_4, and q_4 were calculated.

Comparing the calculated and the observed values for the year, the following results were obtained :

	Sum of squares of Residuals
Declination	0.0736
Horizontal Intensity	789.50
Vertical Intensity	339.57

the unit being minute for declination and .000001 C. G. S. units for horizontal and vertical intensities.

OBSERVATIONS

OF

ATMOSPHERIC ELECTRICITY

FOR

The Year 1897.

The electric potential of the atmosphere is measured by means of a Thomson and Mascart's self-recording quadrant electrometer. Let us shortly describe the apparatus.

The electrometer is contained in a metal case, on the cover of which is the tube which supports the bifilar suspension, and it allows three electrodes to pass, which are respectively in connection with the quadrants and the needle. Two of electrodes are connected with the pairs of quadrants, their other ends being put in connection with the two poles of a battery formed of 30 or 50 water cells, as the case may be, the middle of which is to the earth. The third is connected to the needle by means of the glass vessel containing sulphuric acid, in which are immersed, on the one hand, a platinum wire attached to the electrode, and, on the other hand, a prolongation in platinum of the axis of the needle, having two leaves between the quadrants.

Sir William Thomson's water dropping apparatus is used to collect the atmospheric electricity. It is a cylindrical cistern of copper, placed in the room next to that where the photographic record is taken. The cistern rests on three glass pillars covered with brass, each one projecting from the interior of a glass vessel containing sulphuric acid and the mouth of the vessel being sheltered with a brass-cover so as not to touch it. A pipe of about 2 metres in length projects towards the west from the cistern into' the atmosphere, and from a very small hole at its extremity (1.7 m. above the ground) the water splashes out and breaks almost immediately into drops. The cistern is thus brought to the same potential as that of the atmosphere, near the extremity, and this potential is communicated to the needle with a mirror through the third electrode above mentioned. Thus, in accordance with the variation of electric potential of the atmosphere, the mirror is turned about, so that the light falling upon the mirror reflects to a photographic paper moving by a clock-work, the fixed line being obtained by the light reflected from the glass window at the front of the electrometer.

Owing to the existence of moisture, the zero point is sometimes changed, and therefore it is recorded two times a day by stopping the water spout and connecting the cistern with the earth. Also, to prevent such an error, the sulphuric acid in the instrument is renewed almost every weak.

The sensibility is measured every week by means of a water battery formed of 50 cells. Its mean value for each month is as follows :—

	Value for 1 m. m. (in Volts)
January	3.45
February	3.86
March	2.97
April	3.13
May	3.23
June	1.73
July	1.36
August	1.15
September	2.36
October	1.61
November	2.13
December	2.69

Lastly, it is to be noticed that, since the curve of electric potential of the atmosphere is in general of zigzag nature, the potential is measured by drawing the mean curve.

明治三十年
磁氣要素
及
空中電氣
每時ノ値

HOURLY VALUES
OF
MAGNETIC ELEMENTS
AND
ATMOSPHERIC ELECTRICITY
FOR
THE YEAR 1897.

時

時ハ中央標準時即チ東經百三十五度ノ子午線ノ平均太陽時ニ據ル

磁氣要素

偏角ハ度分ニテ二分力ハ C. G. S. 單位ニテ測ル

磁氣要素一日中ノ變化ノ性質ハ五種ニ分テリ即チ靜穩(C), 不穩(A), 小變動(S°), 變動(S)及激變動(S²), ニシテ各種ノ例ハ卷末ニ揭ゲタリ

空中電氣

電氣「ポテンシヤル」ハ「ヴオルト」ニテ之ヲ測ル

天氣狀況ハ萬國普通ノ記號ヲ以テ之ヲ顯ハス

×印ヲ附シタルモノハ日及月ノ平均ニ算入セス之レ雨霧又ハ其他ノ原因ニ依リ空中電氣ノ常態ヲ顯ハスモノニアラザレハナリ

±印ハ振動非常ニ速カニシテ其時ニ對スル「ポテンシヤル」ノ價正ナルカ負ナルカ判明ニ言フコ能ハザル如キモノヲ示シ[+]又ハ[−]ハ「ポテンシヤル」ノ餘リ高キカ又ハ低キカニ依リ寫眞紙外ニ出テタル塲合ヲ示ス(但シ數字ノ前ニアル[−]號ハ負ノ意ナリ)

‥印ハ「ラムプ」光力ノ薄弱時計ノ停止等ノ事情ニ由リ欠測トナリタルヲ示ス

Time.—

Time is given in the Central Standard Time (the mean time for the meridian 135° E).

Magnetic Elements.—

Declination is measured in degrees and minutes, and the two intensities in C.G.S. units.

The characters of the diurnal variation of the magnetic elements are devided into 5 classes: Calm (C), Agitated (A), Light storm (S°), Storm (S), and Severe Storm (S²), the specimens of which are given at the end of the volume.

Atmospheric Electricity.—

The electric potential is measured in volts.

Weather conditions are represented by international symbols.

The values with the sign × are omitted in taking daily and monthly means, for they do not indicate the normal electric condition in consequence of rain, mist or some other causes.

The sign ± indicates that the oscillation is so rapid that we can not definitely say whether the potential at the corresponding time is positive or negative, the sign + or — the value either too high or too low to be traced on the photographic paper (but the sign — before a number means "negative").

The sign ‥ indicates the want of photographic record, owing to the weakness of the light of lamp, the stopping of Clock, etc.

明治三十年一月

偏角 4° W +

日 Day.	午前 A.M. 1	2	3	4	5	6	7	8	9	10	11	正午 Noon.	午後 1	2	3	4	5	6
1	29.2	29.3	29.3	29.3	29.5	29.3	28.7	28.0	29.2	29.9	30.2	30.6	30.6	29.5	28.7	28.9	28.4	28.7
2	29.2	28.7	29.0	29.3	31.2	29.3	29.2	28.7	29.2	30.1	30.3	30.6	30.5	30.9	31.2	31.1	32.0	31.1
3	30.6	27.4	29.3	28.9	29.3	32.1	34.6	32.1	32.0	32.4	33.3	32.1	31.2	30.6	29.6	29.2	29.3	30.3
4	30.4	30.4	30.3	30.0	30.0	30.2	29.4	28.0	27.5	38.8	31.0	31.3	30.7	30.2	29.6	29.6	29.1	29.9
5	29.4	29.7	29.1	29.6	29.4	29.6	29.3	28.8	29.0	30.4	32.2	32.5	32.5	31.5	29.6	29.3	29.4	29.6
6	29.6	29.4	29.4	29.6	29.6	29.4	29.4	28.8	29.4	30.2	32.2	32.2	31.0	29.7	28.7	28.7	29.1	29.4
7	29.7	29.2	29.5	29.5	29.5	29.5	28.9	28.1	27.9	29.2	31.7	32.3	32.3	30.5	28.8	28.4	28.9	29.2
8	29.5	29.5	29.2	29.1	29.5	29.5	29.4	28.1	27.6	28.8	30.7	32.0	31.1	29.7	28.6	28.9	28.9	29.1
9	29.1	29.1	29.1	29.4	29.4	29.1	29.2	28.9	29.4	30.8	32.0	32.3	32.0	30.8	29.1	28.2	28.6	29.1
10	29.4	29.4	29.1	29.4	29.4	29.2	28.8	27.9	28.6	29.5	31.0	32.3	31.4	29.8	29.4	28.9	28.9	29.1
11	29.2	28.9	28.7	28.9	29.2	29.5	29.2	28.3	29.7	28.5	33.3	33.5	33.3	32.1	30.1	28.7	28.7	29.0
12	30.4	30.2	29.9	29.9	29.9	29.8	29.5	28.9	29.0	30.2	32.1	33.1	32.7	31.1	30.5	29.6	29.8	29.5
13	30.0	30.5	29.6	29.9	29.6	29.6	28.6	27.8	27.3	28.3	31.2	33.4	33.1	32.2	31.0	29.9	29.9	29.6
14	29.7	29.7	29.7	29.6	29.6	29.0	29.7	28.8	28.0	28.8	31.8	33.7	33.5	32.5	31.0	29.7	29.7	29.6
15	29.7	29.3	29.6	29.6	29.7	29.6	29.0	27.7	27.5	28.3	29.6	31.8	32.5	32.5	30.9	31.2	30.0	29.1
16	29.8	30.0	30.3	30.1	30.0	29.7	29.5	28.7	28.4	...	30.6	31.7	31.9	30.7	30.0	29.1	29.2	29.1
17	29.8	29.8	30.1	30.0	30.6	29.8	30.0	28.5	27.8	28.1	30.6	31.7	31.9	31.6	30.0	29.5	29.4	29.4
18	30.0	30.1	30.0	30.0	30.0	30.3	30.0	28.8	28.5	29.2	30.3	30.6	31.1	30.8	29.8	29.7	29.7	29.7
19	29.8	29.6	29.6	29.6	29.8	30.1	29.8	29.2	29.0	29.5	31.0	31.7	31.7	30.2	29.5	29.0	29.3	29.5
20	29.9	29.8	29.6	29.6	29.6	29.6	29.3	28.3	28.3	28.2	29.3	30.3	30.9	30.1	29.5	29.2	29.6	29.6
21	29.9	29.8	29.6	29.5	29.5	29.4	28.9	28.0	28.0	29.3	31.8	32.7	32.7	31.3	29.9	29.1	29.3	29.6
22	29.7	29.7	29.7	29.7	29.7	29.6	28.6	27.8	27.8	28.7	30.0	30.9	30.8	30.3	29.4	28.9	29.4	29.4
23	29.4	29.4	29.3	29.3	29.3	29.0	28.7	27.1	27.1	28.3	29.9	31.3	31.8	31.3	30.2	28.7	28.6	29.0
24	29.1	29.1	29.1	29.3	29.6	29.4	28.7	27.7	28.1	29.0	29.9	30.6	30.8	31.2	30.6	29.4	29.4	29.9
25	29.4	29.1	29.2	29.1	29.4	29.5	29.0	29.7	28.8	29.1	31.0	32.6	32.5	31.6	30.9	29.8	29.5	29.8
26	28.9	29.0	28.7	29.3	28.7	29.6	29.7	28.4	28.7	29.9	31.0	31.2	31.0	30.9	30.3	20.7	29.4	29.6
27	29.5	29.6	29.6	29.5	29.5	29.6	29.2	28.2	28.5	30.1	32.7	34.3	34.3	33.0	31.4	29.9	29.2	29.3
28	29.4	28.9	28.5	28.9	28.9	28.9	28.5	28.7	28.5	28.1	29.7	30.8	31.0	31.3	30.4	29.8	29.5	29.2
29	28.7	29.0	28.0	28.3	29.4	29.6	29.7	28.1	28.0	29.7	30.5	31.2	31.3	31.3	30.2	29.3	29.3	29.3
30	28.1	28.9	29.1	29.1	29.4	29.1	29.2	28.5	27.5	26.5	27.3	28.2	29.2	29.7	30.0	29.8	29.1	29.2
31	29.0	29.0	28.4	28.1	29.0	29.7	29.7	28.6	27.7	27.5	27.7	29.1	30.7	30.9	30.4	29.7	29.4	29.4
平均 Mean	29.53	29.40	29.34	29.40	29.59	29.60	29.40	28.49	28.45	29.18	30.84	31.70	3 .68	30.96	29.98	29.38	29.35	29.46

水平磁力 0.29…………+

日 Day.	午前 A.M. 1	2	3	4	5	6	7	8	9	10	11	正午 Noon.	午後 1	2	3	4	5	6
1	808	809	808	808	808	808	811	807	796	793	794	791	793	806	808	803	808	809
2	809	818	814	821	810	806	820	810	787	781	778	771	771	758	738	735	721	717
3	693	708	709	715	730	726	721	730	734	739	748	754	757	755	751	744	743	733
4	748	752	760	760	762	765	774	779	770	765	768	771	771	768	763	760	760	759
5	767	771	767	768	773	774	777	771	767	769	778	775	779	781	783	777	776	771
6	776	778	777	778	779	781	783	784	775	772	776	787	790	790	789	781	781	781
7	781	782	784	784	787	788	791	787	778	774	783	787	800	807	809	803	797	794
8	793	795	797	799	798	796	802	801	796	795	807	808	809	809	809	806	812	...
9	779	780	783	789	794	798	792	789	773	764	774	792	801	809	810	807	803	801
10	798	800	801	802	804	803	801	798	788	789	800	807	...	...	...	810	805	805
11	806	817	818	816	814	815	818	808	801	796	792	799	805	817	822	822	820	815
12	778	783	780	782	789	790	788	783	771	763	771	782	783	792	799	803	799	798
13	781	781	797	789	788	797	796	791	776	762	756	758	772	777	785	791	797	798
14	788	786	783	785	783	793	791	803	789	773	766	774	782	790	793	795	795	795
15	794	796	797	802	807	808	812	797	778	770	774	774	773	774	778	774	771	773
16	791	791	794	795	796	799	801	802	791	773	766	775	781	792	790	792	795	795
17	...	798	797	796	799	799	799	806	793	782	783	789	790	783	781	786	783	781
18	791	787	791	792	796	797	797	794	784	768	771	785	791	798	803	795	793	790
19	798	797	797	797	799	802	807	805	793	785	794	802	807	...	...	805	802	799
20	796	796	799	800	801	804	804	800	789	777	777	784	...	...	815	813	807	806
21	806	808	810	810	811	811	811	805	788	779	794	803	810	816	818	818	814	811
22	811	812	814	814	815	815	816	816	791	791	793	803	812	821	823	822	815	815
23	815	813	815	814	813	814	820	815	802	791	789	804	812	816	823	826	825	821
24	803	807	809	807	810	812	807	794	781	781	779	783	790	801	814	819	812	807
25	802	799	803	803	800	798	803	802	793	780	782	788	796	802	809	810	811	804
26	805	805	809	806	811	809	804	799	779	769	775	779	783	793	804	808	808	806
27	805	805	807	810	810	811	81	810	797	784	790	801	813	813	819	826	822	812
28	801	798	804	809	812	813	8	809	801	794	796	800	807	808	813	812	815	814
29	812	813	834	828	845	846	4	868	845	823	825	851	849	842	843	842	833	828
30	789	786	797	808	811	819	25	834	842	844	836	830	833	831	830	831	834	820
31	826	814	819	817	819	821	831	836	838	834	830	827	831	833	829	823	800	795
平均 Mean	7917	7930	7959	7969	7992	8006	0 6	8007	7900	7826	7853	7914	7964	7994	8018	8013	7986	7951

JANUARY 1897.

MAGNETIC DECLINATION.

P. M. 7	8	9	10	11	夜半 M. N.	平均 Mean	最大 Maximum		最小 Minimum		較差 Range	記事 Remarks.
′	′	′	′	′	′	′	′	h m	′	h m	′	
28.6	28.4	28.3	28.7	29.0	28.4	29.11	30.6	0 30 p	28.0	8 00 a	2.6	A 7. p.–
32.5	29.3	28.7	28.4	29.6	27.4	29.90	33.3	0 45 p	27.4	M. N.	5.9	S° , S towards night
30.5	30.2	28.6	29.5	29.3	32.1	30.60	**34.6**	6 40 a	**26.0**	1 30 a	8.6	S
29.3	29.7	30.2	30.0	30.2	30.0	29.82	31.3	Noon	27.5	9 00 a	3.8	C
29.7	29.1	30.2	30.0	30.0	29.9	29.99	32.5	Noon	28.8	8 00 a	3.7	C
29.4	29.6	29.4	30.0	30.0	29.9	29.75	32.2	11 30 a	28.8	8 00 a	3.4	C
29.5	29.5	29.5	29.7	29.7	29.7	29.61	32.3	11 30 a	27,9	9 00 a	4.4	C
29.2	29.1	29.2	29.8	29.7	29.8	29.42	32.0	Noon	27.6	9 00 a	4.4	C
29.1	29.1	29.2	29.2	29.4	29.4	29.62	32.3	11 30 a	28.2	4 00 p	4.1	C
29.2	29.1	29.1	29.4	29.4	29.1	29.45	32.4	Noon	27.7	8 25 a	4.7	C
29.5	31.1	32.0	30.6	29.5	30.2	30.07	33.6	Noon	27.7	9 00 a	5.9	S°
29.2	29.2	29.2	29.3	29.0	29.8	30.07	33.4	0 15 p	28.5	8 30 a	4.9	A morning, C afternoon.
29.3	29.3	29.3	29.4	30.0	29.7	29.94	33.5	0 30 p	27.2	9 00 a	6.3	A
29.7	29.6	29.3	29.1	29.1	29.6	30.02	33.8	0 35 p	28.0	9 00 a	5.8	C
29.9	29.7	29.9	29.9	29.9	30.0	29.87	32.5	1 20 p	27.4	9 30 a	5.1	A
29.4	29.4	29.5	29.8	29.4	29.8	29.83	32.0	0 40 p	28.4	9 00 a	3.6	C
30.1	29.5	30.3	30.0	30.0	30.1	29.94	32.2	0 35 p	27.8	9 00 a	4.4	A night
29.8	29.8	29.8	29.7	29.8	29.8	29.89	31.4	1 25 p	28.2	8 37 a	3.2	C
29.9	29.6	30.1	30.1	29.8	29.8	29.88	32.3	0 20 p	28.5	7 36 p	3.8	C
29.8	29.6	29.8	29.9	29.9	29.9	29.57	30.9	1 00 p	28.2	10 00 a	2 7	C
29.8	29.8	29.8	29.8	29.9	29.8	29.88	32.8	0 25 p	28.0	8 40 a	4.8	C
29.6	29.4	29.6	29.4	29.6	29.6	29.47	30.9	Noon	27.7	8 30 a	3.2	C
29.3	29.6	29.4	29.9	29.7	29.3	29.37	32.1	0 40 p	27.0	8 30 a	5.1	C
29.9	30.3	29.9	29.9	29.7	29.4	29.58	31.2	2 00 p	27.7	8 00 a	3.5	C
30.1	30.1	30.3	30.3	29.7	29.4	30.00	32.6	Noon	28.7	8 00 a	3.9	C
29.9	29.7	29.9	29.9	29.9	29.9	29.72	31.2	Noon	28.4	8 00 a	2.8	C
29.3	29.3	29.3	29.1	29.1	29.0	30.10	34.5	0 35 p	28.2	8 00 a	6.3	C
29.4	29.4	29.5	29.2	29.1	29.1	29.36	33.9	2 00 p	26.9	8 45 a	7.0	C
29.0	29.0	29.6	27.3	28.7	28.0	29.27	31.5	0 40 p	26.4	9 36 p	5.1	S°
29.2	28.4	29.1	29.1	28.9	29.1	28.82	30.0	3 00 p	26.5	10 00 a	3.5	S° , A afternoon
29.9	28.0	29.4	29.1	28.5	28.8	29.07	30.9	2 00 p	26.7	10 30 p	4.2	A , S° night
29.64	29.45	29.59	29.53	29.53	29.54	29.71	32.28		27.74		4.54	

HORIZONTAL MAGNETIC INTENSITY.

P. M. 7	8	9	10	11	夜半 M. N.	平均 Mean	最大 Maximum		最小 Minimum		較差 Range	記事 Remarks.
								h m		h m		
814	823	823	822	806	815	8073	833	7 30 p	791	Noon	$.0^{3}42$	S° 7. P.–
700	714	735	664	661	661	7583	821	3 40 a	**659**	11 50 p	162	S°, S towards night
730	732	730	716	724	768	7329	772	11 50 p	662	0 00 a	110	S
754	755	762	765	768	768	7636	779	8 00 a	748	1 00 a	31	C
767	775	773	775	776	778	7737	783	3 00 p	767	3 00 a	16	C
779	777	777	777	777	781	7802	790	2 00 p	772	10 00 a	18	C
793	791	790	788	789	791	7899	809	3 00 p	772	9 45 a	37	C
803	801	798	791	788	782	7998	812	5 00 p	782	M.N.	30	A afternoon
799	799	799	798	800	802	7932	810	3 00 p	764	10 00 a	46	C
804	804	803	804	804	807	8020	810	4 00 p	788	9 00 a	22	C
810	792	769	780	769	769	8037	826	3 25 p	762	9 25 p	64	S°
799	797	797	795	795	790	7878	803	4 00 p	763	10 00 a	40	A
797	797	796	793	790	792	7857	803	5 40 a	756	11 00 a	47	A morning, C afternoon
794	794	798	797	798	798	7893	803	8 00 a	766	11 00 a	37	C
780	789	786	785	787	790	7862	812	7 00 a	762	5 40 p	50	A
795	794	792	791	800	795	7911	802	8 00 a	766	11 00 a	36	C
776	786	775	783	788	787	7887	808	8 15 a	771	6 50 p	37	A night
793	794	795	797	798	797	7915	803	3 00 p	764	10 40 a	39	C
795	802	798	796	805	803	7985	...	...	...	...	...	C
806	809	808	807	807	807	8005	...	...	...	...	...	C
810	810	810	810	811	813	8078	818	3 00 p	779	11 00 a	39	C
816	817	817	816	815	817	8120	823	3 00 p	789	9 30 a	34	C
818	814	813	807	802	808	8121	827	4 15 p	789	10 45 a	38	C
802	796	800	802	804	805	8010	819	4 00 p	779	11 00 a	40	C
803	798	798	793	797	797	7988	815	4 25 p	780	10 00 a	35	C
803	804	803	804	804	805	7990	812	5 15 a	769	10 00 a	43	C
808	808	809	812	809	808	8083	826	4 00 p	782	10 35 p	44	A night
813	811	810	813	814	813	8080	817	5 20 p	794	10 00 a	23	C
826	829	809	808	800	799	8313	**869**	8 15 p	796	11 40 p	73	S°
820	820	812	823	827	826	8220	848	10 15 a	782	1 14 a	66	S° , A afternoon
782	784	789	795	789	797	8150	841	8 33 a	774	7 40 p	67	A , S° night
7932	7941	7927	7905	7904	7925	7948	8136		7665		$.0^{3}471$	

明治三十年一月

鉛直磁力 0.34…………+

日 Day.	午前 A.M. 1	2	3	4	5	6	7	8	9	10	11	正午 Noon.	午後 1	2	3	4	5	6
1	354	354	354	354	353	355	355	346	339	344	347	347	355	358	355	349	353	355
2	355	357	355	359	354	345	359	355	344	346	346	346	345	346	341	345	344	346
3	366	364	364	364	367	367	364	366	358	356	361	368	367	359	354	351	353	354
4	364	364	367	364	366	368	371	366	354	349	357	358	357	357	353	352	354	358
5	353	356	353	355	357	360	357	346	341	341	344	347	350	353	356	350	350	351
6	349	349	349	349	349	349	351	347	338	338	338	350	350	350	347	341	343	340
7	342	342	342	345	345	344	345	340	332	327	339	348	355	355	350	342	341	344
8	345	346	345	346	345	345	350	348	340	337	344	351	354	351	341	340	344	344
9	340	341	341	343	347	345	344	344	333	333	344	353	360	360	352	341	343	343
10	346	342	346	342	346	346	343	342	333	338	343	353	357	356	349	342	342	343
11	346	348	345	348	350	352	348	341	339	338	338	348	353	357	355	350	345	342
12	346	348	345	350	350	346	346	342	333	334	345	352	352	353	356	356	352	352
13	349	351	355	349	350	354	352	349	337	331	330	340	351	355	357	356	355	354
14	351	351	351	353	351	355	355	361	345	329	…	…	…	…	…	…	…	…
15	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…
16	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…
17	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…
18	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	354	348	353
19	357	356	352	352	353	358	358	353	347	342	347	351	359	359	359	353	353	352
20	350	350	351	351	352	355	353	348	343	342	342	345	351	352	353	378	378	383
21	376	379	380	382	380	383	383	376	370	370	376	389	392	393	393	389	383	385
22	378	379	379	381	381	381	385	375	365	366	368	369	384	387	385	381	379	382
23	374	378	381	379	385	382	389	376	361	358	361	374	382	388	388	387	384	382
24	375	378	380	378	380	381	384	373	371	373	373	374	380	387	388	388	383	381
25	379	377	379	379	374	382	382	382	377	373	374	386	386	387	392	387	386	383
26	388	386	387	386	387	387	387	386	375	374	383	388	393	390	390	390	388	388
27	389	389	389	389	389	390	388	377	372	367	375	393	395	390	390	395	389	385
28	387	387	390	390	379	390	390	379	374	370	378	384	389	389	391	390	389	387
29	387	385	394	388	393	388	391	392	374	364	375	391	387	388	385	384	378	378
30	379	378	386	391	393	392	391	392	375	375	373	372	382	382	382	388	389	385
31	389	385	386	386	389	393	396	394	390	396	394	380	389	395	395	394	389	390
平均 Mean	3635	3637	3647	3649	3653	3664	3673	3628	3541	3523	3575	3637	3683	3691	3676	3657	3643	3607

空中電氣

日 Day.	午前 A.M. 1	2	3	4	5	6	7	8	9	10	11	正午 Noon.	午後 1	2	3	4	5	6
1	181	123	76	86	93	89	178	387	196	125	54	49	42	14	30	35	46	49
2	49	41	42	49	57	35	53	62	39	-8	-5	11	26	34	24	39	32	56
3	166	97	93	86	180	246	316	450	259	180	118	94	137	118	102	104	226	185
4	99	158	151	134	231	165	203	205	204	129	99	89	36	31	31	49	56	58
5	57	67	60	84	116	203	241	189	114	64	51	50	63	64	56	35	85	57
6	54	95	97	46	37	95	-61*	32	145	122	73	68	77	79	69	73	57	79
7	100	82	80	71	83	113	81	49	45	39	-10*	16	45	25	18	9	41	68
8	112	128	156	147	156	198	220	269	262	191	118	83	72	57	67	83	105	134
9	47*	53*	78*	69*	70*	±	±	±	±	±	±	±	±	±	±	±	129*	63*
10	71	83	98	102	169	203	230	270	199	153	98	135	75	71	91	120	157	147
11	88	51	42	42	60	91	130	142	103	63	57	51	36	31	35	42	78	91
12	83*	71*	56*	64*	49*	19*	±	±	±	±	±	±	44*	50*	42*	53*	80*	113*
13	172*	154*	111*	128*	151*	143*	157*	129*	106*	95*	87*	84*	+	+	+	+	±	+
14	±	±	±	±	±	±	±	+	+	+	−	−	-8*	7*	10*	11*	8*	15*
15	36*	50*	36*	35*	21*	-50*	-20*	3*	8*	0*	-3*	0*	8*	8*	11*	15*	26*	35*
16	15	23	26	26	23	18	54	55	41	42	…	30	41	41	33	33	41	125
17	71	60	57	73	87	110	134	151	118	85	77	68	59	31	6	3	3	2
18	0*	0*	-16*	-1*	3*	-17*	-8*	-14*	-3*	-14*	-22*	-8*	…	…	…	…	-8*	-8*
19	-8*	-8*	-13*	-8*	-8*	-8*	-9*	-7*	-8*	-8*	-8*	…	-7*	-7*	-8*	-8*	-8*	-12*
20	…	…	…	…	…	…	…	3*	1*	-5*	-7*	…	-5*	-5*	-8*	-8*	-5*	-3*
21	5	6	3	6	8	9	11	6	4	4	3	3	10	11	8	8	12	12
22	11*	9*	10*	10*	14*	19*	17*	19*	22*	14*	5*	5*	…	…	…	±	±	±
23	74	80	68	55	80	112	200	260	188	133	80	32	62	40	36	38	40	48
24	86	76	73	80	99	126	164	228	188	128	100	72	74	73	73	68	72	124
25	108	108	111	120	128	172	209	200	141	92	36	22	32	34	40	52	65	84
26	112	96	81	70	72	80	110	91	84	84	84	100	76	58	80	116	72	80
27	176	160	145	146	163	196	216	200	156	140	106	73	70	50	44	53	72	87
28	80	68	51	46	66	92	107	108	96	85	68	57	62	57	62	76	92	114
29	162	144	119	118	150	158	153	158	122	80	40	14	14	30	45	58	68	69
30	43	32	7	22	42	62	90	108	96	9	28	20	36	19	26	44	42	67
31	88	105	118	126	124	134	134	133	116	100	70	74	68	68	70	74	88	80
平均 Mean	90.8	85.6	79.7	78.9	101.1	123.0	154.0	170.5	132.5	92.8	67.7	55.0	56.0	47.1	47.5	55.1	70.5	82.5

JANUARY 1897.

VERTICAL MAGNETIC INTENSITY.

P. M. 7	8	9	10	11	夜半 M.N.	平均 Mean	最大 Maximum		最小 Minimum		較差 Range	記事 Remarks.
								h m		h m		
356	359	356	355	349	356	3524	364	7 25 p	339	9 00 a	0³ 25	S° 7 p.–
348	360	370	333	348	348	3498	377	9 12 p	340	3 17 p	37	S°, S towards night
356	361	361	356	362	388	3620	390	11 56 p	351	4 00 p	39	S
357	358	361	361	359	358	3597	372	7 00 a	352	4 00 p	20	C
351	352	353	353	353	350	3513	360	6 00 a	341	9 00 a	19	C
345	345	345	345	345	345	3457	351	7 00 a	340	6 00 p	11	C
345	345	345	345	345	344	3436	355	1 12 p	327	10 00 a	28	C
344	345	344	342	341	341	3448	354	1 00 p	337	10 00 a	17	C
343	344	344	347	349	344	3449	360	1 00 p	331	9 26 a	29	C
346	347	348	348	348	347	3455	357	1 00 p	333	9 00 a	24	C
343	342	334	346	339	341	3453	357	2 00 p	331	10 25 a	26	S°
352	352	352	352	353	352	3488	356	3 40 p	333	9 00 a	23	A
355	352	354	352	354	351	3498	357	2 35 a	330	11 00 a	27	A morning, C afternoon
...	...	...	...	...	...	3502	...	...	...	...	...	C
...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...
356	357	358	357	357	353	3548	...	...	...	...	...	C
352	356	354	353	356	354	3536	361	1 20 p	342	10 00 a	19	C
383	386	383	383	383	378	3614	386	8 00 p	342	10 30 a	44	C
383	386	388	385	386	383	3829	393	3 00 p	370	9 30 a	23	C
382	387	387	385	381	381	3795	387	2 00 p	365	9 00 a	22	C
379	382	382	379	378	381	3787	389	7 00 a	358	10 00 a	31	C
383	380	383	383	383	386	3802	388	3 30 p	371	9 00 a	17	C
383	385	385	383	386	385	3822	392	3 00 p	373	10 00 a	19	C
388	388	388	388	388	387	3867	393	1 00 p	374	10 00 a	19	A afternoon
385	388	389	390	389	389	3867	395	4 00 p	367	10 28 a	28	C
387	386	386	387	387	386	3855	391	3 00 p	370	10 00 a	21	C
378	379	377	377	378	378	3828	398	2 23 a	364	10 00 a	34	S°
385	385	335	391	393	388	3847	393	11 00 p	372	Noon	21	S°, A afternoon
387	389	394	397	393	396	3911	397	10 00 p	380	Noon	17	A
3649	3665	3669	3657	3661	3664	3641	3759		3513		0³ 246	

ATMOSPHERIC ELECTRICITY.

P. M. 7	8	9	10	11	夜半 M.N.	平均 Mean	最大 Maximum		最小 Minimum		較差 Range	記事 Remarks.
								h m		h m		
43	40	46	53	51	66	89.7	428	8 20 a	-12	2 00 p	440	
57	83	93	102	110	222	54.3	263	11 30 p	-91	9 50 a	354	
156	187	221	189	187	119	175.7	>450	8 00 a	64	0 20 p	>386	
56	58	67	81	63	42	104.0	299	5 18 a	14	2 40 p	285	
79	106	71	23	40	33	83.7	268	6 48 a	8	9 48 p	290	
90	85	88	111	181	128	86.1	230	11 13 p	-85	7 00 a	315	●° 5.50 a–7.25a
46	42	68	104	123	105	63.2	159	0 18 a	-253	11 23 a	412	●° 9.30 a–1.25p., 1.50–4.35 p.
89	119	118	86	54	52	128.2	306	8 13 a	32	2 00 p	274	[4.35 p–●° 4.50 p–M N
-25*	2*	10*	-22*	56*	75*	...	...	–	...	–	...	●° 4.00 a–● 7.00 a–●✱° 9.40 a–✱ 10.25 a–✱°–
193	193	261	196	230	161	155.2	295	7 55 a	58	0 30 a	237	●°–1.35 a
139	133	115	66	54	63	75.1	181	8 10 p	27	2 00 p	154	
139*	166*	181*	175*	141*	135*	...	...	...	...	...	...	✱° 5.50 a–7.55 a ✱ 11.00 a–2.30 p
–	–	–	±	±	±	...	...	...	...	...	...	●° 4.55 p–✱° 9.15 p–✱ 11.10 p– [9.50p–
31*	37*	40*	38*	37*	21*	...	...	...	...	...	...	–✱–✱° ● 11.50 a–✱° ●°–●° 2.30 p–4.20 p
48*	35*	33*	36*	31*	18*	...	59	1 43 a	-67	5 50 a	126	●° ●°–● 2.40 a–●° 710 a–4.50 p ●° 11.55 p–
66	88	74	78	82	-78	49.3	136	6 00 p	-16	5 42 a	152	–●°0.05 a
3	1	0	0	0	0	50.0	162	7 35 a	0	M N p	162	
-7*	-8*	-8*	-7*	-8*	-8*	...	30	9 00 a	-114	10 55 a	144	●° 2.50 a–315 a ●° 530 a–● 1.35 p–●° 4.15p–
-8*	-6*	-8*	-7*	-7*	-7*	...	0	6 00 p	-27	5 40 p	27	4.25 p ✱° 4.00 a–●° 540 a–△° 6.40 a–11.15 a
0*	0*	3*	3*	3*	2*	...	6	8 10 a	-10	4 00 p	16	
12	14	13	10	9	10	8.2	19	8 20 p	0	9 25 a	19	
±	80*	100*	116*	116*	76*	...	>530	7 00 p	-164	6 50 p	>694	●° 4.00 p– 4.05 p
61	69	81	97	92	87	88.0	300	7 47 a	20	0 15 p	280	
112	90	85	85	93	102	103.0	246	8 16 a	40	4 38 p	206	
94	104	106	102	116	124	100.0	240	6 43 a	-32	11 25 a	272	
142	170	220	284	273	220	119.0	344	10 05 p	54	4 36 p	290	
82	128	164	128	95	88	122.4	280	0 15 a	38	2 55 p	242	
158	200	234	226	166	185	106.5	320	8 42 p	20	3 10 a	300	●° 0.25a ●° 2.50 a–5.15 a
60	42	30	39	47	48	82.0	186	8 00 a	0	0 15 p	186	
114	140	118	87	74	72	53.5	232	8 00 p	-8	2 32 p	240	
-16*	-22*	-160*	-3*	36*	38*	98.3	148	6 45 a	-320	9 25 p	468	●° 5.05 p–11.45 p–
88.2	99.9	108.2	102.2	101.9	95.5	91.1						

明治三十年二月

偏角 4°W+

日	午前 A. M.											正午	午後					
Day.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2	3	4	5	6
1	28.9′	28.3′	28.3′	39.0′	29.0′	29.0′	29.3′	29.0′	27.9′	27.3′	27.4′	28.7′	29.2′	29.0′	29.0′	28.9′	28.7′	28.7′
2	28.9	28.9	29.1	28.5	28.6	28.9	29.2	28.6	27.9	27.8	29.2	30.8	30.5	29.7	29.2	28.9	28.6	28.8
3	28.8	28.7	28.7	28.7	28.5	28.7	28.5	27.4	27.2	27.5	28.4	29.9	30.8	29.9	28.7	28.0	27.7	28.1
4	28.7	27.8	28.7	28.1	27.7	30.0	29.3	29.0	28.8	28.7	30.4	31.9	32.0	31.0	30.7	29.0	30.4	30.6
5	28.1	28.6	28.4	29.8	28.6	28.7	29.3	28.7	28.4	28.9	29.3	30.5	30.5	30.0	28.9	28.0	28.9	29.2
6	28.6	28.5	28.8	28.6	28.6	29.4	28.6	27.3	27.2	28.0	29.3	30.5	31.0	30.2	29.8	28.9	28.8	29.8
7	28.4	28.4	28.4	28.4	28.5	28.7	28.1	27.2	26.9	27.5	28.5	30.0	30.6	30.9	30.4	29.6	29.4	29.6
8	27.4	27.6	26.8	26.8	27.1	27.7	29.2	28.4	28.9	29.3	29.3	28.9	29.7	30.0	29.7	29.0	28.4	38.3
9	28.5	28.3	28.3	28.3	28.5	28.6	28.6	27.6	26.7	27.0	29.2	29.9	31.4	32.1	31.4	29.8	28.9	28.2
10	27.8	27.8	27.3	27.3	27.8	28.4	28.5	27.0	25.5	24.0	24.9	28.1	28.9	29.6	29.3	28.4	27.4	27.5
11	27.9	27.7	28.2	28.3	29.9	28.2	28.6	27.7	26.7	26.9	27.2	29.2	30.1	29.9	29.6	29.1	28.0	28.0
12	27.8	27.8	27.9	27.9	27.8	28.1	27.9	27.1	25.6	25.0	26.0	27.9	29.4	29.1	28.4	28.8	28.1	27.8
13	27.8	27.5	27.8	27.8	28.0	28.1	28.1	27.7	26.5	26.2	27.1	38.3	29.4	29.6	29.3	28.1	27.4	27.4
14	27.6	27.6	27.3	27.7	28.0	28.9	29.2	27.6	26.4	25.7	27.1	29.3	30.5	30.8	29.5	28.1	28.9	25.6
15	27.6	27.8	28.9	28.2	29.2	27.6	27.6	26.8	25.7	26.6	27.0	27.6	28.5	28.2	27.9	28.2	27.6	28.1
16	27.2	26.9	27.7	27.5	27.5	27.7	27.5	27.4	27.2	26.7	27.8	28.0	28.1	27.8	27.8	27.8	27.8	27.8
17	27.1	27.3	27.4	27.4	27.6	27.6	27.4	26.1	25.0	26.3	26.1	27.1	27.4	27.7	27.6	27.6	27.4	27.6
18	27.3	27.3	27.3	27.5	27.5	27.7	27.5	26.5	26.0	26.2	27.6	28.6	29.1	28.8	27.9	27.3	27.2	27.5
19	27.2	27.4	27.2	27.4	27.1	27.2	26.9	25.6	24.3	24.2	25.2	27.4	28.8	29.1	28 0	27.1	27.1	27.2
20	27.0	26.9	26.9	26.9	26.9	26.9	...	...	26.4	28.2	29.8	31.1	31.2	30.8	30.2	29.0	28.2	28.6
21	28.8	28.8	28.8	28.6	28.5	28.2	27.8	26.7	24.7	27.6	29.7	31.5	32.4	32.6	29.8	29.2	29.2	29.4
22	29.1	28.8	28.8	28.7	28.5	28.4	27.1	26.5	26.5	26.9	28.5	30.3	31.2	31.3	30.2	29.3	28.7	28.7
23	28.4	28.4	28.3	28.2	28.0	28.2	27.9	27.1	26.8	28 3	29.9	31.7	31.2	31.1	30 3	29.6	28.9	29.6
24	28.0	28.5	28.5	28.2	28.2	28.3	27.6	26.3	24.5	26.9	31.0	32.0	32.4	31.1	30.4	28.9	28.3	28.3
25	28.4	28.0	27.9	28.0	28.0	27.9	27.1	26.4	25.7	25.8	28.1	29.4	30.5	30.2	29.3	28.0	27.7	28.1
26	29.0	26.1	26.2	24.8	25.4	25.4	25.6	26.0	25.6	25.4	27.9	...	...	...	...	...	...	28.5
27	29.8	29.7	30.2	29.7	29.7	29.2	31.3	29.9	29.7	29.1	30.4	31.1	31.1	30.2	3.01	30.1	30.1	30.8
28	29.9	28.3	29.8	31.1	31.1	31.6	32.4	28.3	27.0	27.6	30 5	31.0	32.4	32.6	31.7	29.7	29.5	29.2
平均 Mean	28.21	27.99	28.16	28.12	28.21	28.33	28.37	27.40	26.63	26.99	28.31	29.66	30.30	30.12	29.45	28.67	28.42	28·46

水平磁力 0.29............+

日	午前 A. M.											正午	午後					
Day.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2	3	4	5	6
1	811	801	800	804	808	813	818	826	828	824	828	826	831	826	812	811	810	804
2	806	806	811	814	811	809	810	813	811	814	818	816	827	829	824	814	808	802
3	802	804	806	807	808	811	815	813	809	...	802	804	810	819	826	825	822	818
4	774	791	785	765	782	783	815	814	814	820	804	787	784	784	774	780	773	757
5	771	775	784	783	782	783	787	783	777	771	777	790	792	796	796	796	790	782
6	789	789	794	794	795	794	803	806	799	787	795	812	815	816	814	814	804	790
7	810	810	806	806	806	806	800	794	790	788	789	789	792	797	799	803	800	796
8	785	791	798	807	798	799	804	812	817	817	812	810	811	806	807	809	809	805
9	809	808	806	808	815	812	815	812	802	797	789	781	783	793	817	814	814	814
10	812	813	818	820	827	824	829	834	834	832	811	807	807	805	812	823	824	822
11	816	810	818	817	828	828	826	832	828	816	798	795	793	798	804	807	810	811
12	816	823	825	822	825	825	830	833	833	831	821	819	822	822	823	819	822	821
13	826	827	820	821	821	825	829	829	827	825	819	813	817	814	818	823	825	821
14	819	820	825	822	826	824	825	820	820	813	797	797	791	782	777	799	796	798
15	812	808	813	814	811	813	813	814	813	810	810	810	802	799	801	804	803	798
16	814	810	808	806	809	812	816	813	815	821	816	814	807	800	803	804	803	804
17	817	813	813	810	814	818	826	830	833	831	824	816	816	821	815	813	813	809
18	807	807	809	807	812	815	823	826	826	823	820	815	815	820	821	821	818	815
19	819	819	819	819	819	820	825	835	844	841	836	825	829	825	825	826	825	824
20	826	828	829	829	830	...	...	...	...	...	...	...	...	...	...	...	...	...
21	...	...	...	...	...	...	...	...	...	...	...	846	831	823	827	822	816	813
22	820	820	820	819	822	823	821	816	811	807	802	798	805	809	815	822	822	818
23	816	818	822	819	814	814	808	800	795	786	786	784	796	805	816	816	809	794
24	813	805	807	807	807	809	820	824	824	809	796	798	809	818	821	821	820	818
25	803	799	804	811	814	812	815	814	807	796	790	793	798	808	818	817	818	817
26	810	847	838	838	839	847	836	831	826	817	800	...	...	...	...	...	...	...
27	...	...	...	...	...	...	...	...	...	...	...	772	782	791	793	790	779	768
28	796	785	786	788	791	789	795	799	796	792	774	781	785	781	779	789	796	804
平均 Mean	8077	8087	8102	8099	8121	8123	8162	8169	8152	8112	8046	8038	8058	8072	8091	8108	808	8047

FEBRUARY 1897.

MAGNETIC DECLINATION.

P. M. 7	8	9	10	11	夜半 M.N.	平均 Mean	最大 Maximum	h m	最小 Minimum	h m	較差 Range	記事 Remarks
29.0	29.3	29.3	29.0	29.3	29.0	28.80	29.5	9 10 p	27.1	10 25 a	2.4	A
28.9	29.2	29.2	29.2	28.8	29.1	29.02	30.8	Noon	27.8	10 00 a	3.0	C
29.1	30.1	27.2	29.6	27.1	28.4	28.57	30.9	1 00 p	26.8	11 09 p	4 1	C, A night
29.0	29.3	29.3	27.5	28.0	28.4	29.35	31.2	1 15 p	27.2	9 53 p	4.0	S°
29.5	29.0	29.0	29.0	28.0	28.7	29.00	30.5	1 00 p	27.7	2 42 a	2.8	A morning, C
29.5	28.8	28.8	28.5	28.6	28,3	28.93	30.8	0 45 p	27.2	9 00 a	3.6	C
29.4	29.8	29.3	29.0	:8.5	27.9	28.89	31.0	2 18 p	26.9	9 00 a	4.1	C
28.6	28.6	28.6	28.4	28.3	28.4	28.47	29.7	3 00 p	26.7	2 30 a	3.0	A morning, C
28.2	28.0	28.5	28.5	28.2	27.9	28.77	32.3	2 30 p	26.7	9 00 a	5.6	C
27.8	28.1	28.0	28.3	28.0	28.0	27.65	29.6	2 00 p	**24.0**	10 00 a	5.6	C, A night
28.2	28.0	27.7	27.9	28.2	28.0	28.30	30.2	1 24 p	26.3	9 45 a	3.9	A
28.1	27.9	27.7	27 9	27.9	28.1	27.75	29.5	1 20 p	25.0	10 00 a	4.5	C
27.4	27.1	27.0	27.6	27.8	27.6	27.77	29.9	1 30 p	26.1	9 50 a	3.8	C, A night
28.2	27.9	27.7	27.4	27.1	28.6	28.03	30.1	4 50 a	25.4	9 30 a	4.7	S°
27.6	27.9	27.6	27.5	27.5	27.5	27.67	29.7	4 50 a	25.3	9 26 a	4.4	A
27.5	27.8	27.5	27.5	27.5	27.5	27.56	28.1	1 00 p	26.7	10 00 a	1.4	C
27.6	27.6	27.6	27.6	27.4	27.4	27.20	27.7	2 00 p	24.7	9 35 a	3.0	C
27.5	27.5	27.5	27.5	27.3	27.3	27.47	29.1	1 00 p	26.0	9 00 a	3.1	C
27.2	27.4	27.4	27.2	27.1	27.2	27.00	29.1	2 00 p	24.2	10 00 a	4.9	C
28.9	28.9	28.9	29.0	29.0	29.0	28.58	31.2	1 00 p	25.8	8 25 a	5.4	C
29.4	29.1	28.8	28.6	29.1	29.2	29.00	32.6	2 00 p	26.2	9 00 a	6.4	C
28 8	29.3	29.1	28.4	28.8	28.7	28.77	31.3	2 00 p	26.5	9 00 a	4.8	C
30.3	29.6	29.2	28.6	28.6	27.0	28.97	31.4	Noon	26.8	9 00 a	4.6	S°
28.3	28.5	28.2	29.1	28.6	29.1	28.72	32.4	1 00 p	**24.0**	8 22 a	8.4	S°
28.4	28.3	28.7	28.4	28.3	28.0	28.11	30.5	1 00 p	25.4	9 30 a	5.1	A
28.8	29.7	29.8	29.9	28.9	29.5	27.36	...		...	...	...	S morning, S°
31.0	31.1	26.9	29.8	29.9	29.8	30.03	31.3	7 00 a	26.9	9 00 p	4.4	S°
29.8	29.7	29.7	29.7	29.7	29 5	30.07	**32.9**	2 14 p	26.9	9 30 a	6.0	S°
28.64	28.70	28.36	28.45	28.25	28.32	28.44	30.49		26.16		4.33	

HORIZONTAL MAGNETIC INTENSITY.

P. M. 7	8	9	10	11	夜半 M.N.	平均 Mean	最大 Maximum	h m	最小 Minimum	h m	較差 Range	記事 Remarks
804	803	796	801	801	806	8122	836	1 15 p	793	9 08 p	.0^{3}43	A
803	800	800	800	807	802	8106	830	1 45 p	799	10 08 p	31	C
801	786	800	774	785	772	8052	826	3 00 p	772	M. N.	54	C, S° night
768	774	776	779	777	779	7850	826	4 47 a	**754**	5 40 p	72	S°
782	785	788	785	797	790	7851	799	3 12 p	771	10 00 a	28	A morning, C
788	793	801	806	804	809	8005	818	1 16 p	785	4 30 p	33	C, A late at night
792	792	794	790	795	792	7973	810	2 03 a	786	11 18 a	24	C
807	805	804	804	808	809	8056	819	9 18 a	783	1 40 a	36	A morning, C
815	820	814	810	812	812	8072	820	8 00 p	781	Noon	39	C
819	811	811	811	818	820	8185	835	8 20 a	799	0 24 p	36	C, A afternoon
817	814	812	816	816	816	8136	832	8 00 a	791	0 27 p	41	A
816	812	819	810	821	821	8221	833	8 00 a	811	8 16 p	22	C, A occasionally
817	815	817	815	815	821	8208	831	1 14 a	812	2 24 p	19	C, A night
792	797	803	804	799	825	8071	827	5 10 a	777	3 00 p	50	A
805	801	805	806	805	815	8077	829	0 07 a	798	2 08 p	31	A
803	803	807	809	809	809	8090	822	1 17 a	800	2 25 p	22	A
809	810	810	810	810	808	8162	833	9 06 a	806	6 32 p	27	C
813	815	817	818	819	820	8167	827	8 18 a	805	0 42 a	22	C
822	822	823	825	825	826	8257	**844**	9 14 a	818	0 27 a	26	C
...	...	...	...	...	...	8284	...	...	...	...	...	C
817	819	816	818	820	820	8222	...	...	...	...	...	C
812	811	811	817	818	818	8149	825	10 16 p	798	Noon	27	C
776	779	785	791	797	813	8016	825	3 12 a	773	7 35 p	52	S°
815	813	798	809	805	821	8120	834	8 13 a	796	11 00 a	38	S°, S late at night
815	817	818	821	816	828	8104	821	10 00 p	790	11 00 a	31	A
...	...	...	...	...	...	8299	...	...	...	...	...	S morning, S°
753	756	788	784	774	786	7782	...	...	..	...	...	S°
800	807	807	808	807	809	7935	809	M. N.	773	11 30 a	36	S
8023	8023	8046	8047	8062	8095	8088	8255		7905		.0^{3}350	

明治三十年二月

日 Day	午前 A.M. 1	2	3	4	5	6	7	8	9	10	11	正午 Noon	午後 1	2	3	4	5	6

鉛直磁力 0.34… ……..+

Day	1	2	3	4	5	6	7	8	9	10	11	Noon	1	2	3	4	5	6
1	401	397	396	398	400	401	406	408	403	393	386	382	393	395	389	390	395	395
2	396	396	396	398	396	395	398	395	393	388	387	385	389	391	389	382	386	386
3	375	375	376	378	380	382	383	390	374	365	…	369	376	376	376	376	374	376
4	375	380	383	373	379	377	396	391	385	381	362	364	361	370	372	372	377	372
5	376	380	385	384	382	385	385	378	371	370	371	378	385	390	388	385	381	382
6	383	382	386	385	386	387	390	387	379	371	370	378	385	385	386	386	382	379
7	384	383	382	380	382	386	382	379	378	373	371	373	379	386	387	388	386	386
8	380	381	384	389	383	387	389	392	393	384	377	379	377	381	387	388	388	387
9	389	387	386	387	389	391	393	390	381	378	374	374	381	390	401	404	397	394
10	390	390	391	391	391	392	394	395	391	386	373	376	383	390	391	394	392	391
11	389	388	392	391	400	393	392	397	392	378	374	378	385	395	399	402	403	402
12	401	401	403	401	401	403	407	407	403	400	392	393	398	403	403	401	404	400
13	404	402	399	401	401	406	406	408	399	394	389	387	393	397	404	408	406	401
14	403	405	405	403	405	406	407	402	395	391	379	391	392	391	394	407	405	399
15	402	402	405	404	407	404	405	401	397	390	386	388	388	392	394	398	398	397
16	360	358	359	359	359	361	363	360	358	357	351	351	351	…	354	359	360	360
17	362	360	360	360	362	366	367	370	366	356	350	347	347	353	352	354	358	359
18	360	360	363	363	364	367	371	371	369	363	361	360	365	367	365	364	364	864
19	362	362	362	362	364	366	368	369	369	360	351	345	353	358	361	362	362	363
20	363	364	363	364	365	…	…	…	354	347	347	253	356	359	363	366	366	363
21	363	364	366	365	363	364	366	365	356	350	347	347	348	355	363	363	362	365
22	366	366	366	365	366	367	366	360	356	352	351	351	356	357	360	364	364	362
23	362	392	365	360	360	362	362	354	349	341	341	343	353	360	363	363	359	357
24	359	363	366	363	362	364	368	362	353	341	341	344	352	359	361	362	361	358
25	360	358	360	362	362	362	361	359	351	339	336	341	347	355	356	353	353	353
26	353	353	356	355	356	361	353	355	351	342	339	…	…	…	…	…	…	…
27	320	328	325	330	327	328	332	332	325	327	324	325	329	336	337	337	332	333
28	346	336	340	344	343	342	348	345	338	331	319	329	339	343	348	351	354	360
平均 Mean	3744	3744	3757	3755	3762	3780	3799	3782	3725	3660	3611	3641	3689	3744	3757	3770	3766	3757

空中電氣

Day	1	2	3	4	5	6	7	8	9	10	11	Noon	1	2	3	4	5	6
1	26*	-48*	-144*	-180*	-216*	-234*	-248*	-260*	-264*	-176*	-16*	-36*	0*	2*	8*	12*	20*	0*
2	…	…	…	…	…	…	-122*	0*	6*	4*	…	…	0*	0*	2*	8*	12*	18*
3	14	16	19	16	15	22	32	35	28	43	55	·0	55	47	67	70	59	75
4	96	88	69	58	51	51	109	168	129	105	72	63	68	53	53	51	60	120
5	46	42	47	66	85	139	251	303	185	100	87	77	71	42	40	62	73	118
6	140	184	85	130	163	280	170	184	162	99	44	55	6	36	13	-31	30	61
7	72	72	73	75	82	106	171	166	77	0	-72	-283	-4	-84	-49	13	68	91
8	154	152	113	106	113	127	143	157	160	154	141	128	68	83	93	92	80	72
9	120	127	153	175	184	194	277	295	179	127	86	37	0	30	44	34	48	67
10	55*	47*	56*	65*	82*	121*	187*	262*	224*	105*	78*	63*	54*	37*	26*	30*	58*	7*
11	…	…	…	…	…	…	…	…	13*	-8*	-79*	-152*	-195*	-98*	-53*	-85*	19*	45*
12	…	…	…	…	…	…	…	…	155*	64*	-72*	0*	24*	24*	16*	20*	43*	53*
13	198	185	121	200	162	131	132	287	223	149	62	31	35	28	23	34	53	74
14	83	64	58	64	87	102	110	100	71	57	44	37	15	38	38	35	39	64
15	107	105	105	114	129	126	136	124	105	96	91	61	55	91	129	158	160	129
16	126*	65*	65*	72*	85*	101*	118*	117*	120*	92*	44*	34*	80*	-24*	17*	-17*	38*	44*
17	…	…	…	…	…	…	52*	65*	19*	-17*	-88*	-119*	-124*	-116*	-63*	-22*	15*	19*
18	27	31	37	42	50	58	65	-10	-192	-210	-112	-58	-43	-58	-6	15	16	19
19	93*	108*	127*	83*	93*	135*	…	…	…	90*	84*	52*	+	+	−	+	+	+
20	…	…	…	…	…	…	…	7*	14*	11*	16*	19*	22*	27*	32*	54*	65*	52*
21	109*	98*	102*	89*	…	…	…	…	+	+	+	+	54*	47*	45*	62*	109*	98*
22	50	60	97	99	83	111	111	129	94	72	55	43	56	46	44	58	80	74
23	87	84	86	90	94	84	63	57	43	46	59	59	69	57	39	37	82	106
24	106	163	89	106	216	163	143	223	176	76	61	51	67	40	32	27	25	31
25	67	63	61	63	75	94	118	125	87	71	43	16	26	20	24	26	28	43
6	34	28	24	32	32	30	34	39	29	16	18	18	12	22	20	22	28	31
7	32	36	38	40	44	58	86	78	48	14	6	6	27	10	18	20	22	23
8	93	64	66	64	64	95	97	101	83	60	60	68	31	24	30	42	60	52
2																		
2																		
2																		
平均 Mean	84.8	83.6	71.5	85.6	96.1	109.5	124.9	142.3	93.7	59.7	44.4	22.7	34.1	29.2	36.3	42.5	56.2	69.9

FEBRUARY 1897.

VERTICAL MAGNETIC INTENSITY.

P. M. 7	8p	9d	10p	11	夜半 M. N.	平均 Mean	最大 Maximum	h m	最小 Minimum	h m	較差 Range	記事 Remarks.
396	398	396	368	400	398	3964	408	8 00 a	382	Noon	0^3 26	S°
389	389	389	389	393	388	3910	398	4 00 a	382	4 00 p	16	C
371	369	376	369	376	374	3750	397	7 00 a	369	9 47 p	28	C, S° night
379	384	384	384	380	377	3774	399	7 10 a	355	0 44 p	44	S
385	386	388	386	388	385	3822	390	2 00 p	370	10 00 a	20	A morning, C afternoon
382	386	387	389	387	385	3835	390	7 00 a	370	11 00 a	20	C
384	386	387	384	387	382	3823	388	4 00 p	369	11 24 a	19	C
388	388	388	388	388	388	3856	393	9 00 p	377	11 00 a	16	A morning, C
394	397	393	391	391	390	3892	404	4 00 p	374	11 00 a	30	C, A night
390	388	390	390	391	391	3892	395	8 00 a	373	11 00 a	22	A
406	403	402	404	403	400	3945	406	5 40 p	374	11 00 a	32	A
398	397	401	400	405	401	4010	408	2 26 a	390	11 14 a	18	A
401	398	402	402	404	406	4007	408	8 00 a	387	Noon	21	C, A afternoon
400	402	405	403	400	413	4001	409	4 38 p	379	11 00 a	30	A
401	398	400	402	400	401	3983	**419**	0 07 a	383	11 28 a	36	A
359	358	360	360	359	358	3580	405	7 00 a	387	11 17 a	18	C
359	360	360	360	360	359	3586	373	8 00 a	348	0 33 p	25	C
364	365	365	364	364	364	3645	374	8 00 a	361	Noon	13	C
363	365	366	366	365	362	3619	372	8 26 a	347	Noon	25	C
363	364	365	364	364	362	3607	...	......	...	......	...	C
367	368	366	368	369	366	3615	371	11 00 p	348	11 00 a	23	C
361	364	365	365	365	365	3617	369	6 00 a	353	11 00 a	16	C
354	358	362	365	358	358	3571	370	11 00 p	342	10 00 a	28	A
361	361	355	362	362	367	3586	370	7 00 a	339	10 25 a	31	S°, S late at night
354	355	356	356	356	359	3543	365	4 09 a	338	11 00 a	27	A
..	...	...	...	...	...	3522	...	......	...	......	...	S morning, S°
329	335	347	345	344	345	3322	351	9 30 p	323	11 25 a	28	S°
354	355	354	353	353	353	3449	363	6 00 p	**317**	11 15 a	46	S
3760	3769	3781	3780	3782	3777	3745	3883		3630		0^3 235	

ATMOSPHERIC ELECTRICITY

P. M. 7	8p	9d	10p	11	夜半 M. N.	平均 Mean	最大 Maximum	h m	最小 Minimum	h m	較差 Range	記事 Remarks.
14*	...	...	...	...	...	....	...	...	...	....	...	-●°or●-
18*	13*	0 *	0 *	12*	12*	....	...	...	...	....	...	-●or●°-10.05 a●°9.50p-10.25 p ⫽M. N.
75	71	44*	-20*	75	93	44.6	59	10 24 a	193	9 36 p	252	●°8.33p-10.10 p
55	82	80	60	49	46	76.5	189	8 24 a	33	5 54 a	157	—
85	81	100	97	152	160	104.5	**332**	7 42 a	39	2 30 p	371	—
38	86	50	72	67	69	91.4	324	1 41 a	53	6 08 p	377	—
99	131	142	122	108	118	53.9	201	7 24 a	**277**	11 42 a	478	⫽3.p
128	248	207	150	131	120	130.0	271	7 47 p	38	1 08 p	233	—
87	113	150	231	106	75	122.5	330	8 15 a	4	1 06 p	334	—
54*	17*	45*	...	...	...	....	277	8 42 a	77	8 53 p	354	△°✱°2.0) a-2.10a ✱°9.30 p
66*	...	...	...	...	...	....	...	...	...	....	...	⫽2.p,4. p
68*	83*	87*	76*	87*	151*	....	...	...	...	....	...	—
72	45	51	168	121	94	111.6	321	7 45 a	19	2 53 p	302	—
68	95	114	95	110	133	71.7	161	11 38 p	0	0 45 p	161	—
137	141	110	133	160	154	119.0	187	4 30 p	19	1 35 p	168	●°0.50p-2.15p
19*	...	...	...	...	...	....	...	...	...	....	...	●°1.50 a-3.20a, 4.10p- 4.55p, 8.55p
16*	16*	19*	22*	23*	27*	....	...	...	...	....	...	⫽11.a-1. p,3p ⌞⫽M.N.
16	19	21	23	33	56	6.7	77	7 03 a	300	9 53 a	377	⫽8. a-2. p
...	...	...	...	...	...	....	...	...	...	....	...	✱°1.45p-1.53p,1, ✱°220p,-✱2.50 p-
43*	62*	...	...	...	36*	....	...	...	...	....	...	-✱-✱°4.00 a-9.20 a
115*	80*	58*	58*	56*	49*	....	...	...	...	....	...	—
80	94	125	125	102	107	83.1	166	5 33 a	37	5 22 p	129	—
133	186	154	129	121	113	86.6	235	8 16 p	31	9 53 a	204	—
40	48	50	59	74	74	86.7	255	8 22 a	23	5 06 p	232	—
59	59.	39	34	35	37	54.7	144	7 05 a	16	2 16 p	128	●°1.(5 p-2.40 p
40	56	70	68	68	42	34.0	99	6 47 p	0	1 07 p	99	●°0,50p- 1.35p ⦑SE 10.50 p-11.30 p
34	56	68	62	62	64	39.9	102	7 11 a	24	10 55 a	126	—
88	77	28	30	41	28	60.3	143	0 54 a	18	2 17 p	125	—
74.1	93.8	91.7	97.5	89.7	87.9	75.9						

明治三十年三月

偏角 4° W +

日 Day.	午前 A.M. 1	2	3	4	5	6	7	8	9	10	11	正午 Noon.	午後 1	2	3	4	5	6
1	29.4	29.2	29.8	29.8	29.7	29.2	26.7	26.9	26.7	27.9	30.2	31.3	32.6	32.0	31.3	29.8	29.4	28.5
2	29.1	28.5	28.3	28.5	29.2	29.8	30.5	28.6	28.3	26.9	29.2	32.0	32.6	32.3	...	29.7	29.2	29.1
3	28.6	28.6	28.8	28.8	29.5	29.5	28.6	37.2	26.4	27.8	31.1	33.9	33.9	32.7	31.0	29.7	29.4	29.7
4	28.6	58.5	28.5	38.0	28.5	28.5	29.4	27.8	27.9	28.0	29.5	31.4	32.1	33.0	32.9	31.8	31.1	31.1
5	28.5	28.5	28.5	28.8	29.4	30.8	29.4	29.5	28.5	28.5	31.1	34.0	34.0	32.9	31.8	31.0	29.9	30.2
6	29.3	29.4	29.6	29.1	29.4	29.4	28.1	26.8	26.8	28.1	29.8	32.9	33.9	33.8	32.2	31.2	30.3	30.1
7	29.1	29.1	29.1	29.1	29.0	28.8	28.5	27.8	26.6	28.1	29.0	32.5	32.2	31.6	30.9	29.7	29.1	29.1
8	29.3	29.6	29.6	29.6	29.6	29.6	28.1	25.9	25.5	23.1	29.7	31.7	32.2	32.2	32.3	31.5	30.0	30.6
9	28.8	27.5	28.8	29.8	29.7	29.7	30.6	30.6	28.8	29.0	30.0	32.5	32.9	33.3	32.5	31.0	29.8	20.7
10	28.5	29.4	30.6	29.4	29.6	29.7	28.8	28.1	27.1	29.5	27.3	29.6	31.5	32.0	31.5	30.9	30.0	29.4
11	29.3	29.4	29.4	29.4	29.6	30.0	•32.2	31.3	26.9	26.6	29.6	31.3	31.7	32.2	31.9	30.9	29.7	29.4
12	29.7	28.5	29.4	29.6	29.4	29.4	28.8	28.1	27.2	27.9	30.4	31.6	32.2	32.0	31.2	29.8	29.6	29.6
13	29.1	29.4	29.3	29.3	29.4	29 4	29.7	28.4	28.1	29.1	30.9	32.5	32.5	32.3	31.2	30.6	30.0	30.1
14	29.6	29.1	29.4	29.6	29.6	29.7	29.3	28.1	26.9	27.1	28.7	29.7	30.7	31.0	30.3	29.7	29.4	29 6
15	29.4	29.7	29.4	29.4	29 3	29.0	28.7	28.4	28.1	28.5	30.0	31.2	31.5	31.3	30.4	29.7	29.1	29.0
16	29.0	29.1	29.1	29.4	29.3	29.1	28.4	27.5	26.8	28.2	29.3	31.5	32.3	32.3	31.5	30.0	29.0	29.6
17	29.2	29.0	28.9	28.9	29.2	29.0	28.1	26.8	25.9	26.7	28.9	30.8	31.4	31.2	...	29.2	28.4	29.3
18	28.4	28.6	28.9	28.7	28.9	29.6	29.7	27.8	27.1	27.8	29.7	32.4	32.5	32.4	31.1	29.5	28.9	29.5
19	29.3	29.0	29.3	29.2	29.2	29.3	27.8	25.9	25.2	26.8	29.7	...	...	...	...	...	...	...
20	29.2	28.6	28.6	28.6	28.7	29.7	27.4	27.7	26.8	27.4	28.7	...	31.0	31.7	30.5	29.2	28.3	28.9
21	28.9	29.1	28.8	28.9	28.8	28.9	28.6	28.8	26.1	26.6	28.0	29.2	30.8	31.0	30.8	30.5	29.2	29.1
22	29.1	29.1	28.8	28.6	28.9	28.9	28.3	27.0	26.3	27.0	26.7	31.0	32.0	32.0	31.3	30.7	29.4	30.5
23	29.1	28.9	28.8	28.6	28.8	29.5	28.6	26.7	25.4	27.0	29.5	31.8	32.0	31.0	31.0	31.0	28.9	30.1
24	28.9	28.8	29.1	29.1	29.1	29.2	29.5	28.2	27.6	28.3	29.5	31.6	32.4	32.4	31.3	29.5	29.1	29.1
25	27.6	26.0	26.6	29.1	29.2	29.5	29.1	27.5	26.1	26.3	28.3	30.5	31.4	32,0	31.4	30.5	29.1	29.2
26	28.9	28.9	28.9	28.9	28.9	29.1	28.0	27.0	26.4	26.3	27.6	28.9	30.4	30.8	31.0	30.5	29.4	29.1
27	29.1	29.1	29.1	28.9	29.1	29.4	28.6	27.0	26.3	27.5	29.1	30.4	30.7	31.0	30.6	29.2	29.1	29.2
28	28.8	28.7	29.1	28.8	29.4	29.6	28.8	27.2	25.5	26.1	28.4	30.6	31.9	32.4	31.8	30 6	29.4	29.1
29	28.6	28.4	28.3	28.6	27.7	29.0	28.4	27.7	27.4	27.1	28.4	31.2	32.6	33.2	31.8	30.5	29.4	29.7
30	28.4	28.0	28.8	29.0	30.2	30.7	29.6	27.7	26.4	26.7	29.1	32.1	34.0	33.1	32.4	30.6	29.4	28.4
31	28.8	28.8	28.8	28.8	29.1	29.1	28.7	25.8	25.9	26.9	29.6	32.4	33.8	33.8	33.2	31.5	29.9	30 0
平均 Mean	28.95	28.79	28.98	29.04	29.21	29.42	28.90	27.74	26.81	27.28	29.26	31.47	32.19	32.16	31.47	30.33	29.43	29.50

水平磁力 0.29…………+

日 Day.	午前 A.M. 1	2	3	4	5	6	7	8	9	10	11	正午 Noon.	午後 1	2	3	4	5	6
1	806	804	812	808	808	810	823	817	809	804	791	798	791	802	809	814	817	823
2	819	821	818	819	819	814	822	823	819	808	805	801	801	801	801	804	805	805
3	813	813	809	806	807	807	808	804	797	789	786	792	805	816	822	818	815	813
4	800	800	800	800	803	807	814	817	800	792	798	799	797	799	780	785	786	782
5	791	782	783	787	782	790	795	791	788	786	774	756	782	791	785	784	787	784
6	790	792	792	795	797	801	798	793	788	779	774	778	700	800	801	799	800	799
7	797	798	798	800	801	801	810	806	797	792	806	796	823	828	831	830	821	819
8	813	813	813	817	817	819	824	821	812	827	788	795	799	809	807	802	800	782
9	795	799	799	797	804	819	831	818	818	812	802	802	804	804	803	809	810	806
10	813	821	823	824	824	826	829	820	815	813	812	811	807	806	819	817	814	810
11	819	821	822	823	826	826	822	816	835	832	800	796	808	818	819	821	823	819
12	819	830	823	822	824	826	829	827	827	821	814	824	825	827	826	826	822	815
13	829	831	828	830	834	835	838	837	827	805	798	798	808	818	820	820	811	798
14	826	830	827	826	826	824	832	832	833	831	827	825	826	831	837	838	836	834
15	827	834	832	830	830	831	831	826	820	821	820	818	819	826	831	827	826	826
16	832	833	828	830	829	830	831	829	823	814	812	810	814	824	831	830	828	825
17	826	828	825	828	829	831	832	828	817	805	806	813	824	836	843	..	836	834
18	831	823	822	822	823	821	821	819	813	803	800	812	821	834	837	835	822	821
19	823	826	825	827	829	830	833	823	810	794	797	...	...	...	...	..	...	...
20	837	842	841	839	837	843	841	844	841	831	824	828	837	843	843	840	835	830
21	832	833	833	835	833	836	838	835	829	821	815	821	828	836	839	839	840	836
22	835	832	831	831	830	833	832	831	824	819	817	815	819	825	831	827	832	824
23	831	835	836	834	830	831	837	837	831	812	807	808	803	820	830	819	808	812
24	820	819	818	820	817	820	819	829	827	822	818	822	830	836	839	836	830	827
25	853	849	842	821	826	832	842	816	837	832	819	816	821	829	830	830	826	819
26	829	831	828	831	831	833	835	836	834	828	823	823	829	835	836	829	828	829
27	831	832	833	833	833	835	838	833	833	829	827	839	841	847	844	836	834	834
28	832	831	823	826	827	828	833	828	827	815	803	812	820	831	838	840	837	832
29	834	833	834	831	840	833	837	821	813	813	811	809	818	828	841	843	836	826
30	811	810	820	827	813	820	823	819	820	816	802	810	813	821	817	815	811	808
31	811	810	807	813	807	808	807	803	798	808	813	821	830	836	832	813	808	810
平均 Mean	8202	8212	8202	8204	8205	8226	8260	8229	8178	8121	8061	8083	8144	8219	8241	8216	8195	8161

MARCH 1897.

MAGNETIC DECLINATION.

P. M.					夜半	平均	最大		最小		較差	記事
7_p	8_p	9_p	10_p	11_p	M. N.	Mean	Maximum	h m	Minimum	h m	Range	Remarks.
28.8	29.2	29.1	29.1	29.7	29.4	29.40	32.6	1 00 p	26.4	7 35 a	6.2	S°
29.1	28.7	29.2	29.2	29.4	29.4	29.43	32.6	1 00 p	26.9	10 00 a	5.7	A
29.9	29.8	29.7	29.5	29.1	28.9	29.67	34.2	0 28 p	26.4	9 00 a	7.8	C
31.7	29.9	29.8	29.4	28.2	28.3	29.75	33.0	2 00 p	26.6	10 28 p	6.4	S°
29.5	29.7	29.7	29.5	28.6	28.9	30.05	**34.3**	0 24 p	28.2	8 40 a	6.1	S° morning, C afternoon
30.0	29.8	30.1	29.6	29.6	29.6	29.95	34.0	1 00 p	26.7	8 05 a	7.3	C
29.6	29.6	27.5	29.6	29.4	29.6	29.36	32.7	0 19 p	26.7	9 00 a	6.0	A
30.4	30.0	29 6	29.3	29.4	29.0	29.49	32.4	0 44 p	**23.2**	10 00 a	9.2	S°
29.6	30.0	30.9	29.6	28.7	28.4	30.09	33.4	2 00 p	27.6	2 00 a	5.8	A
30.0	28.7	29.0	29.6	29.4	29.6	29.42	32.6	1 34 p	26.3	10 16 a	6.3	A
29.7	29.1	28.5	29.1	29.3	29.3	29.82	32.9	7 38 a	26.4	9 38 a	6.5	A
28.7	29.7	29.6	29.4	29.6	28.2	29.57	32.3	1 00 p	27.3	9 00 a	5.0	C
29.4	29.3	29.3	29.4	29.4	29.4	29.90	32.7	0 18 p	27.2	0 05 a	5.5	A with a large wave between 0a and 1a
29.7	29.3	29.4	29.0	28.1	29.3	29.26	30.8	1 00 p	26.7	9 34 a	4.1	C
29.6	29.4	29.6	29.4	28.5	28.4	29.46	31.6	1 00 p	27.8	9 15 a	3.8	C
29.7	29.6	29.6	29.6	29.4	29.1	29.52	32.4	1 00 p	26.9	9 00 a	5.5	C
29.5	29.5	29.3	29.2	29.3	29.3	29.00	31.6	1 00 p	25.6	9 30 a	6.0	C
29.9	29.6	29.6	29.6	29.5	28.6	29.51	33.0	0 30 p	27.3	9 24 a	5.8	C
29.5	29.5	29.3	29.3	29.3	29.2	28.64	......	.. ..	......	.. ..	...	C
29.4	29.4	29.4	29.4	29.4	28.8	28,99	31.7	2 00 p	26.9	9 16 a	4.8	C
29.2	29.2	29.2	29.4	29.4	29.2	29.07	31.0	2 00 p	26.0	9 20 a	5.0	C
30.2	29.5	29.4	29.5	29.2	29.1	29.27	32.0	1 00 p	26.1	9 32 a	5.9	C morning, A afternoon
30.4	29.5	29.4	29.4	29.4	28.5	29.30	33.0	0 48 p	25.4	9 00 a	7.6	A
29.5	29.4	29.2	28.9	29.1	27.8	29.44	32.4	1 00 p	27.5	9 15 a	4.9	C
29.4	29.2	29.2	28.9	29.1	29.1	28.93	32.0	2 00 p	25.9	9 11 a	6.1	S° early in morning
29.2	29.4	29.2	29.1	29.1	29.2	28.93	31.0	3 00 p	26.3	10 00 a	4.7	C
29.2	29.4	29.4	29.2	29.2	29.1	29.12	31.0	2 00 p	26 3	9 00 a	4.7	C
29.7	29.4	29.3	29.0	23.7	28.7	29.21	32.4	4 00 p	25.5	9 00 a	6.9	C
30.3	28.8	29.9	29.1	27.2	28.0	29.22	33.5	1 20 p	26.9	9 45 a	6.6	S°
29.6	29.6	29.4	28.8	29.0	28.4	29.56	34.1	1 15 p	26.4	9 00 a	7.7	S°
30.0	29.4	29.1	29.0	28.8	28.8	29.58	34.1	1 45 p	25.9	8 00 a	8.2	A
29.69	29.44	29.38	29.29	29.08	28.92	29.43	32.58		26.51		6.07	

HORIZONTAL MAGNETIC INTENSITY

P. M.					夜半	平均	最大		最小		較差	記事
7_p	8_p	9_p	10_p	11_p	M. N.	Mean	Maximum	h m	Minimum	h m	Range	Remarks.
840	822	826	814	812	814	8114	823	7 08 a	791	0 40 p	.0³ 32	S°
807	810	810	811	807	812	8105	828	1 45 a	796	0 30 p	32	C
810	806	810	807	809	801	8068	823	2 54 p	786	10 50 a	37	C
775	786	793	787	782	784	7944	822	7 30 a	774	6 48 p	48	S°
789	791	798	792	791	782	7859	799	6 16 a	**754**	11 50 a	45	S° morning, C afternoon
799	801	798	796	798	795	7939	803	3 10 p	774	11 00 a	29	C
814	813	813	811	809	809	8093	836	2 15 p	786	9 35 a	50	S°
792	802	800	799	793	792	8057	827	10 00 a	776	6 34 p	51	S°
811	796	781	789	805	807	8050	833	7 17 a	779	9 05 p	54	A
803	821	817	818	820	820	8168	831	1 40 a	802	1 42 p	29	A
813	811	813	810	814	825	8180	836	9 05 a	795	11 26 a	41	A
825	824	829	828	826	834	8247	832	2 12 a	812	11 13 a	20	C
809	816	815	825	821	820	8196	**860**	10 11 a	794	10 50 a	66	A with a large wave between 0a and 1a
831	834	839	841	840	827	8314	841	10 52 p	820	0 15 a	21	C
826	833	831	831	833	846	8281	838	2 12 a	815	11 50 a	23	C
824	824	825	828	826	828	8253	833	2 15 a	810	Noon	23	C
833	834	829	829	830	830	8272	843	3 00 p	802	10 32 a	41	C
823	825	826	826	823	824	8220	839	3 35 p	797	10 42 a	42	C
828	828	833	835	840	840	8248	...	......	...	......	...	C
827	829	830	831	837	834	8360	845	6 32 a	823	11 04 a	22	C
833	835	833	832	834	835	8325	840	5 00 p	815	11 00 a	25	C
825	832	834	830	832	837	8282	837	m. n.	815	Noon	22	C morning, A afternoon
813	818	823	819	820	825	8225	838	7 13 a	801	0 50 p	37	A
827	827	827	829	829	856	8268	839	3 00 p	816	11 20 a	23	C
825	828	830	827	829	832	8309	857	1 30 a	816	Noon	41	S° early in morning
831	829	830	828	829	832	8303	836	8 00 a	822	11 40 a	14	C
836	835	837	836	835	833	8352	847	2 00 p	827	11 00 a	20	C
828	836	833	832	832	833	8282	840	4 00 p	803	11 00 a	37	A
808	809	792	812	844	820	8239	844	3 25 p	792	9 00 p	52	S°
811	811	813	809	815	826	8150	827	4 00 a	802	11 00 a	25	S°
814	816	814	814	818	815	8136	836	2 00 p	798	9 00 a	38	A
8171	8185	8188	8186	8203	8215	8188	8075		7740		.0³ 335	

明治三十年三月

鉛直磁力 0.34…………+

日	午前 A.M.											正午	午後					
Day.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2	3	4	5	6
1	351	351	357	354	351	354	357	347	327	313	306	315	319	337	347	347	352	354
2	352	352	351	353	354	353	358	353	346	337	329	335	343	349	352	367	368	368
3	365	364	363	364	365	369	369	365	359	348	341	351	361	369	376	373	369	369
4	363	367	367	367	369	373	375	372	363	350	351	358	364	371	361	369	371	370
5	373	367	371	374	371	379	379	372	366	358	346	336	362	370	372	371	370	370
6	370	373	374	374	376	382	379	374	370	364	355	360	370	378	379	380	379	378
7	369	371	370	371	373	375	381	375	364	351	358	360	381	383	378	377	370	370
8	369	367	367	368	369	374	378	372	360	348	331	354	357	368	367	367	367	359
9	368	372	367	366	371	379	386	373	369	364	358	358	363	366	368	373	373	372
10	376	376	374	371	373	374	377	370	364	357	346	340	343	347	363	365	364	364
11	369	369	370	370	372	375	378	372	374	359	333	340	353	362	364	366	369	369
12	371	373	369	369	370	373	376	371	362	351	345	355	359	371	371	370	366	362
13	367	367	366	368	371	373	376	376	357	346	345	355	385	395	394	391	383	379
14	392	392	390	390	389	391	393	393	388	379	376	377	382	387	391	392	391	392
15	384	387	386	383	382	384	384	383	379	370	369	370	375	381	386	381	380	382
16	383	384	382	383	381	384	384	379	364	350	345	351	363	375	386	383	381	375
17	375	376	374	378	376	380	380	377	366	351	350	359	380	379	385	384	377	375
18	373	370	370	371	374	375	378	370	360	344	343	350	365	375	373	373	372	369
19	371	373	374	375	377	377	376	367	350	335	332	…	…	…	…	…	…	…
20	374	377	376	376	375	382	383	380	368	349	344	353	361	369	371	372	371	369
21	370	370	371	373	372	377	380	380	371	360	353	360	365	370	376	379	379	376
22	369	367	367	367	368	374	376	372	366	358	350	348	359	367	371	372	375	372
23	367	368	369	367	364	370	373	371	361	343	343	356	361	370	378	376	366	372
24	366	365	366	366	365	367	373	371	362	353	349	355	362	366	370	369	368	366
25	370	366	363	356	361	368	374	372	356	340	331	331	344	356	359	366	365	362
26	362	361	360	361	359	362	363	361	357	344	336	339	350	357	360	360	360	360
27	358	358	357	357	357	360	361	359	352	338	340	357	359	360	358	353	353	354
28	352	354	352	352	355	360	361	354	348	336	324	330	335	348	359	360	358	355
29	354	354	353	349	359	353	357	344	336	329	329	329	332	343	354	357	352	349
30	345	346	352	354	344	350	352	350	343	328	320	332	335	352	354	348	346	341
31	340	342	341	344	341	344	344	337	328	320	325	328	340	347	347	340	340	340
平均 Mean	3667	3671	3667	3668	3672	3707	3729	3681	3592	3475	3420	3481	3576	3656	3690	3694	3678	3664

空中電氣

日	午前 A.M.											正午	午後					
Day.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2	3	4	5	6
1	12	18	24	29	33	24	0	-24	-33	8	16	0	16	16	8	20	13	-6
2	26	54	74	70	39	54	47	71	65	31	56	52	54	50	50	45	53	66
3	77*	71*	60*	58*	83*	112*	+	+	+	108*	77*	77*	54*	39*	52*	33*	51*	58*
4	…	…	…	…	…	…	260*	209*	138*	105*	86*	73*	70*	59*	46*	46*	44*	47*
5	…	…	…	…	…	…	…	…	…	…	…	…	40*	±	±	±	±	+
6	81	78	116	89	54	88	84	46	64	51	54	57	24	53	50	43	78	86
7	113*	113*	79*	87*	105*	117*	117*	120*	98*	56*	29*	22*	19*	22*	29*	29*	33*	-16*
8	-30*	11*	27*	38*	40*	-52*	-166*	-65*	-89*	35*	33*	42*	33*	37*	34*	27*	30*	33*
9	…	…	…	…	…	…	…	…	…	…	…	…	30*	30*	27*	26*	36*	32*
10	51	47	±	±	36	33	39	38	32	40	41	39	26	25	23	20	23	28
11	36	38	40	42	47	64	81	64	17	9	26	26	17	27	8	18	14	29
12	36	32	33	43	39	46	75	75	42	21	36	36	47	36	22	2	-5	26
13	79	81	89	69	60	58	87	56	-67	-124	-42	15	-11	-69	-34	10	8	11
14	46	51	58	63	79	127	154	166	99	59	54	62	66	65	65	65	56	69
15	123*	115*	111*	111*	139*	±	±	±	—	—	—	±	45*	35*	45*	28*	33*	58*
16	58	81	89	86	83	96	103	37	54	88	28	46	31	30	29	30	31	28
17	29	23	21	23	34	34	29	26	32	23	20	14	10	17	11	11	10	14
18	18	23	27	28	33	31	65	35	14	-2	-6	-5	-16	-6	-2	2	10	10
19	4*	3*	2*	4*	-5*	-4*	11*	0*	-3*	-4*	-101*	-160*	-177*	-191*	-138*	-133*	-178*	-137*
20	-100*	-61*	-33*	-28*	-38*	-81*	-89*	-50*	-3*	-4*	-4*	-7*	-10*	-8*	-2*	0*	1*	9*
21	-5	-5	-5	-7	-8	-10	-14	-5	-8	-5	-5	-4	-3	-4	-2	0	5	4
22	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*
23	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	11*	10*	6*	1*	-8*	-16*
24	70	64	69	87	149	249	225	108	-65	-144	-60	-35	-51	-87	-154	-103	-30	22
25	104	85	73	91	145	237	308	232	123	100	59	38	57	33	43	49	70	60
26	93*	27*	24*	44*	34*	-11*	-105*	-189*	-192*	—	-164*	±	99*	64*	126*	137*	127*	159*
27	-69*	-124*	51*	28*	84*	84*	132*	110*	105*	58*	22*	18*	42*	30*	41*	60*	60*	63*
28	31*	14*	14*	42*	58*	84*	90*	-17*	-172*	-181*	-88*	39*	51*	72*	71*	37*	3*	-81*
29	190	202	192	151	189	272	340	238	76	43	42	49	31	31	39	36	41	50
30	197	229	146	98	67	95	94	110	98	116	-39*	12	13	28	53	39	53	-39*
31	85	99	71	84	40	59	46	34	20	10	20	23	71	38	3	-4	14	29
平均 Mean	65.5	70.6	69.8	62.2	65 8	91.6	103.7	76.9	33.1	19.1	21.2	25.0	22.5	16.6	12.5	16.6	26.1	32.9

MARCH 1897.

VERTICAL MAGNETIC INTENSITY.

P. M. 7p	8p	9p	10p	11p	夜半 M. N.	平均 Mean	最大 Maximum		最小 Minimum		較差 Range	記事 Remarks.
								h m		h m		
355	354	357	352	351	352	3442	359	7 08 a	306	11 00 a	$.0^3$ 53	S°
368	369	368	368	367	369	3554	369	8 00 p	329	11 11 a	40	A
369	399	370	369	369	364	3646	376	3 00 p	341	11 00 a	35	C
369	374	377	372	369	371	3672	381	6 16 a	349	10 48 a	32	S°
372	374	377	374	373	368	3685	384	6 20 a	336	Noon	48	S° morning C afternoon
377	377	377	375	375	374	3737	382	6 00 a	355	11 00 a	27	C
371	372	371	371	372	373	3711	384	1 56 p	350	10 27 a	34	S°
367	375	375	373	370	371	3655	378	7 00 a	330	11 10 a	48	S°
374	366	366	373	379	378	3701	388	7 17 a	354	11 25 a	34	A
364	374	373	374	375	375	3658	387	1 40 a	338	0 35 p	49	A
367	369	371	372	375	382	3667	383	11 47 p	333	11 00 a	50	A
372	372	375	373	372	370	3674	376	7 00 a	344	10 38 a	32	C
388	391	391	394	392	392	3768	397	2 18 p	344	10 50 a	53	A
392	392	395	394	388	387	3889	395	9 00 p	376	11 00 a	19	C
383	387	387	387	387	388	3819	392	2 22 a	368	11 42 a	24	C
377	380	380	381	381	377	3754	386	3 00 p	345	11 00 a	41	C
377	378	375	375	376	376	3741	...	...	...	...	...	C
373	376	375	374	373	374	3687	378	7 00 a	349	10 42 a	29	C
375	377	380	379	380	380	3693	...	...	...	...	...	C
372	375	376	376	375	375	3712	385	6 34 a	344	11 00 a	41	C
377	376	377	376	376	372	3723	380	7 00 a	353	11 00 a	27	C
376	376	376	375	376	375	3688	376	9 00 p	348	Noon	28	C morning, A afternoon
373	377	379	376	376	373	3679	379	9 00 p	341	10 09 a	38	A
368	370	369	370	369	379	3660	380	11 52 p	349	11 00 a	31	C
369	370	370	368	368	367	3605	378	0 06 a	329	11 10 a	49	S° Early in morning
361	361	364	361	362	361	3576	364	9 00 p	335	11 26 a	29	C
357	357	358	359	358	358	3557	361	7 00 a	338	10 00 a	23	C
355	359	356	358	357	358	3515	361	7 00 a	323	11 00 a	38	A
344	345	348	360	372	355	3482	372	11 00 p	324	11 25 a	48	S°
348	348	348	347	350	355	3453	356	2 30 p	320	11 00 a	36	S°
348	347	347	347	348	344	3404	348	7 00 p	320	11 00 a	28	A
3690	3705	3712	3717	3710	3707	3651	3771		3404		$.0^3$ 387	

ATMOSPHERIC ELECTRICITY.

P. M. 7p	8p	9p	10p	11p	夜半 M. N.	平均 Mean	最大 Maximum		最小 Minimum		較差 Range	記事 Remarks.
								h m		h m		
12	20	-24	16	±	12	9.2	177	10 07 p	-110	10 42 p	187	●° 8.p
95	116	66	70	63	83	60.4	140	7 20 p	-27	0 22 a	167	-●°-✱1.a -✱°4.a -4.20a
...	...	...	...	...	...	...	...	...	...	...	...	
68*	86*	84*	93*	117*	...	...	...	...	...	...	...	●° 10.40.p –
+	59*	46*	48*	56*	70*	...	...	...	...	...	...	-●°-● 0.35a -●°1.20a -7.28a, ⫽4p-
104	94	216	159	188	111	86.2	281	9 07 p	-11	0 15 p	292	—⫽-5.a
-141*	-174*	-98*	10*	-22*	28*	...	141	5 35 a	-211	7 35 p	352	●°0.35p -0.55p, ●°5p -●5.50p-
...	...	...	...	...	...	...	...	...	...	...	...	-● -●°0.40a -9.45a.
40*	49*	44*	57*	52*	41*	...	...	...	...	...	...	●°8·50a -●11.40a--
29	29	30	31	34	36	33.2	130	3 36 a	-132	3 55 a	262	-●-●°5.50a -6.45a, ⫽10.a -8.p, 11.p,
39	39	44	57	51	44	36.5	92	7 31 a	-33	3 18 p	125	⫽1.a, 4.a, 9.a-10.a
35	53	84	78	78	84	43.9	107	11 12 p	-21	4 35 p	128	—
42	25	28	28	44	49	20.5	104	6 56 a	173	9 43 a	277	⫽ 11.a
99	105	118	137	172	148	91.0	251	6 35 a	20	11 00 a	231	—
83*	97*	97*	111*	73*	88*	...	172	5 18 a	-216	...	388	●°4.50a -0.20p ●°10.50p-
26	27	27	31	31	30	50.0	138	6 35 a	23	11 00 a	115	-●°-0.50a ●°5a -11.10a ●°4.19p -7.20p
17	12	16	16	14	24	20.0	40	5 40 a	3	1 45 p	37	●°5.08p ●°9.30p
10	10	11	6	6	5	12.8	75	6 08 a	-17	1 15 p	92	— ⌈8.20p-
136*	-104*	-65*	-93*	-46*	-45*	...	42	7 07 a	-219	...	261	✱°●°6.50a ●°7,25a-●0.30p-✱°●°7.50p -●°
12*	18*	0*	0*	1*	-6*	...	28	7 52 p	-122	1 00 a	150	-●°-✱°●5.40a-✱6.15a-✱△7.15-9.45a●°9.50p-11.45p
2	2	4	1	0	-8	-3.3	21	7 20 a	-33	6 48 a	54	●°5a-●°✱°5.50a-●°7.50a-830a
0*	0*	0*	0*	0*	0*	...	...	...	...	...	...	—
-19*	-13*	7*	40*	75*	86*	...	...	...	...	...	...	—
65	95	114	122	121	116	[illegible]	317	6 52 a	-209	4 00 p	526	⫽ 10a Noon 2.p-4p
49	46	98	60	30	16	[illegible]	344	7 36 a	-19	11 35 a	363	●° 11.50p-
-110*	-179*	-33*	-104*	-81*	-104*	...	187	3 20 p	...	...	...	-●°-
77*	-4*	23*	41*	50*	51*	...	156	7 25 a	-162	1 12 a	318	-●°-
25*	89*	131*	168*	168*	214*	...	228	11 50 p	-206	9 30 a	434	-●°-7.20p
62	76	109	157	175	154	122.7	361	7 12 a	25	1 42 p	336	—
41	87	73	65	77	81	85.1	267	2 00 a	-84	11 20 a	351	●°8.30a -9.54p
47	75	69	113	74	68	17.4	136	9 55 p	-41	3 40 p	177	●°10, 10a -10.30a ⫽ 8a -6p
45.5	53.6	63.7	67.5	72.4	61.9	49.8						

明治三十年四月

偏角 4° W +

日 Day	午前 A. M. 1a	2a	3a	4a	5a	6a	7a	8a	9a	10a	11a	正午 Noon	午後 1p	2p	3p	4p	5p	6p
1	28.0	28.6	28.7	28.8	29.1	30.2	28.8	27.7	25.9	28.0	30.9	33.1	33.1	32.9	31.8	30.2	28.8	29.4
2	28.8	28.4	29.0	29.9	28.8	28.0	26.5	25.9	24.6	30.5	33.2	36.0	37.6	36.4	33.5	31.9	31.6	31.3
3	29.3	29.0	29.0	28.7	28.8	28.1	26.2	24.8	24.9	27.5	31.3	33.5	34.1	33.7	32.1	30.5	29.1	29.6
4	29.6	29.1	29.1	29.1	29.3	29.6	26.2	24.6	24.5	25.8	29.4	32.8	35.0	34.2	32.1	30.2	28.4	29.4
5	29.3	29.1	29.0	29.0	29.3	28.6	27.7	25.9	25.6	26.5	29.7	31.5	32.8	33.1	32.1	30.9	29.6	29.6
6	28.5	28.7	30.4	27.6	27.7	28.7	28.5	27.6	27.6	29.8	30.8	32.9	33.9	33.9	33.0	32.2	30.7	30.1
7	27.3	28.2	28.9	29.0	29.8	30.8	29.3	28.6	27.4	27.9	30.7	32.0	33.6	33.7	32.6	31.4	29.6	29.3
8	29.2	29.2	30.1	29.2	29.3	30.7	28.6	26.4	26.3	27.1	29.6	32.0	33.3	33.6	32.8	30.9	30.4	29.3
9	29.0	28.3	28.0	28.0	28.1	28.6	28.0	27.5	26.2	26.3	27.7	30.8	32.6	32.8	32.7	31.6	30.2	29.6
10	29.3	29.0	28.3	28.4	29.1	29.4	29.1	27.5	27.4	27.2	27.5	29.4	31.9	32.9	32.9	32.4	30.5	31.6
11	29.4	29.4	29.5	29.5	29.5	30.1	30.0	28.8	27.8	28.1	29.2	31.0	32.6	32.8	32.3	30.7	30.3	30.6
12	29.4	29.1	29.1	29.2	29.4	29.2	28.1	26.6	25.6	26.6	28.5	31.0	32.8	33.5	33.2	32.3	31.0	30.0
13	29.3	29.5	29.3	29.3	29.3	29.5	28.2	26.4	25.3	26.7	29.8	32.1	32.6	33.0	32.6	31.0	30.1	29.6
14	29.4	29.6	29.6	29.4	29.9	29.7	28.6	27.4	28.4	28.2	31.5	34.8	35.4	3.56	33.0	32.5	31.2	30.5
15	30.2	29.7	29.6	29.4	29.6	28.6	27.8	26.5	27.0	29.0	31.5	33.4	33.8	33.2	32.5	30.9	29.7	29.7
16	30.3	29.8	29.5	29.7	29.5	28.7	27.2	26.2	25.7	27.2	29.4	30.6	31.4	31.9	31.6	30.6	29.8	29.8
17	29.4	29.0	29.1	28.4	29.5	29.3	29.3	29.1	29.7	29.4	30.6	33.1	35.4	34.1	33.8	32.8	29.7	30.6
18	28.5	28.5	29.1	28.9	29.1	28.3	28.2	28.5	28.9	30.1	31.7	32.9	33.6	33.6	31.7	30.8	29.9	29.9
19	29.6	29.5	30.0	28.9	29.5	28.7	28.1	27.3	27.4	28.3	30.2	32.4	33.4	33.7	32.5	31.4	30.2	30.3
20	29.9	29.7	28.1	29.0	28.4	29.6	29.3	28.9	31.5	32.7	31.2	31.2	31.6	31.8	34.3	33.5	32.7	31.2
21	30.6	30.9	29.0	28.7	29.7	30.0	30.6	30.4	30.1	30.9	32.2	33.1	33.1	32.9	31.9	31.3	30.9	30.9
22	30.6	30.3	30.1	30.3	30.3	30.0	28.8	27.7	27.5	29.4	30.7	33.5	33.8	33.6	32.3	31.6	32.8	31.0
23	29.5	29.5	30.1	28.5	28.6	27.6	27.0	25.9	25.8	28.0	31.0	34.3	34.8	34.3	33.9	32.6	31.3	30.7
24	28.8	27.8	27.0	30.5	30.5	30.4	30.1	30.1	29.9	31.7	33.5	33.2	33.2	34.0	34.2	32.6	29.5	28.2
25	27.4	27.9	27.4	29.0	29.2	29.2	28.1	26.7	28.6	28.9	31.2	31.9	34.3	34.4	33.1	32.8	30.3	28.6
26	29.7	29.4	30.3	29.3	29.3	28.5	28.4	28.6	29.0	30.4	31.7	33.1	34.4	31.9	31.7	30.4	30.3	30.4
27	29.7	29.1	29.1	30.3	29.7	29.0	28.4	27.5	28.5	30.1	30.7	32.0	33.9	33.5	32.8	31.8	28.8	29.6
28	29.4	29.4	29.1	29.1	29.2	29.1	27.8	27.2	27.5	28.8	30.8	32.9	33.6	33.3	32.7	21.9	31.0	31.0
29	29.2	29.2	29.4	29.2	29.1	28.5	27.3	25.9	26.2	28.3	31.9	33.3	33.8	32.4	30.7	29.8	29.5	29.5
30	29.3	29.2	29.0	29.0	29.0	29.0	27.6	25.8	26.4	29.3	31.4	32.4	33.6	33.4	29.8	30.3	29.8	29.6
平均 Mean	29.27	29.14	29.13	29.11	29.25	29.19	28.27	27.27	27.24	28.62	30.65	32.21	33.63	33.47	32.54	31.46	30,26	30.03

水平磁力 0.29…………+

日 Day	午前 A. M. 1a	2a	3a	4a	5a	6a	7a	8a	9a	10a	11a	正午 Noon	午後 1p	2p	3p	4p	5p	6p
1	817	819	817	812	809	819	817	806	797	793	801	802	816	821	822	811	808	808
2	800	800	801	812	808	822	819	804	790	778	766	747	748	751	755	766	735	730
3	790	794	793	800	799	804	805	799	786	777	775	784	808	818	822	821	818	814
4	812	812	811	811	811	817	818	811	804	786	786	803	813	824	829	830	827	810
5	805	809	813	813	809	814	809	809	804	797	787	791	804	817	819	823	818	810
6	821	824	813	829	822	823	817	806	778	753	758	767	781	792	798	795	801	799
7	817	800	807	814	815	827	832	819	810	814	804	809	805	810	818	821	815	807
8	806	811	816	818	818	819	830	822	811	808	793	790	790	805	813	822	822	816
9	822	824	830	828	834	834	830	816	809	803	807	805	825	826	824	824	822	812
10	819	823	827	823	823	822	823	824	814	809	819	823	813	819	826	801	794	783
11	806	810	810	813	816	820	825	830	828	824	820	819	822	826	829	824	821	812
12	819	820	820	823	824	828	830	827	818	813	807	810	820	821	831	830	824	818
13	830	831	829	830	831	833	833	830	818	810	810	818	830	831	823	824	826	818
14	819	821	825	825	822	828	826	817	799	797	784	799	802	804	807	793	787	795
15	811	826	824	816	815	818	816	809	795	787	791	802	815	820	820	820	820	819
16	818	816	820	816	819	822	822	818	811	806	811	820	827	827	827	828	826	832
17	816	809	816	823	824	833	827	816	805	798	786	782	778	786	792	791	810	794
18	827	811	814	812	813	817	817	811	810	811	816	827	827	831	829	828	826	821
19	811	810	822	815	808	812	815	805	793	786	788	799	810	816	821	820	813	808
20	828	822	845	820	827	834	830	813	797	796	811	832	842	860	826	802	795	772
21	761	780	787	787	782	793	792	794	789	784	776	782	792	803	802	805	800	792
22	795	794	794	795	796	799	797	792	784	781	785	801	816	826	826	817	810	804
23	804	807	808	814	820	828	830	826	816	811	810	822	836	851	859	833	819	809
24	791	800	787	785	793	824	806	795	788	773	768	786	793	785	793	794	802	805
25	829	812	800	789	786	784	791	792	775	791	795	796	791	782	785	779	796	792
26	805	806	810	806	801	806	803	802	800	806	816	819	821	825	824	814	803	794
27	802	803	801	806	810	806	805	799	794	797	800	799	794	792	800	804	803	797
28	803	805	805	802	804	801	804	793	786	779	777	793	809	820	823	816	801	792
29	805	804	809	807	807	808	803	794	787	788	790	802	808	812	818	818	814	811
30	801	805	805	805	807	815	812	801	792	793	805	816	818	820	827	828	821	812
平均 Mean	8100	8103	8120	8116	8118	8170	8161	8093	7996	7950	7947	8015	8085	8140	8163	8127	8092	8029

APRIL 1897.

MAGNETIC DECLINATION

P. M. 7_p	8_p	9_p	10_p	11_p	夜半 M. N.	平均 Mean	最大 Madximum		最小 Minimum		較差 Range	記事 Remarks.
′	′	′	′	′	′	′	′	h m	′	h m	′	
29.4	29.9	29.6	29.7	29.1	29.0	29.61	33.2	1 50 p	25.9	9 00 a	7.3	S°
30.6	30.6	29.4	29.1	29.3	29.1	30.42	**37.6**	1 00 p	24.3	8 45 a	13.3	S
30.0	29.9	29.9	29.9	30.0	29.9	29.57	34.1	1 00 p	24.4	8 20 a	9.7	A
30.3	30.5	29.9	30.2	29.4	29.6	29.51	35.0	1 00 p	**23.3**	8 35 a	11.7	S° morning, A afternoon
30.3	29.1	29.6	30.2	29.9	29.1	29.48	33.1	2 00 p	25.6	9 00 a	7.5	A.
30.4	30.4	30.3	30.0	29.5	29.2	30.10	34.1	1 20 p	26.6	8 40 a	7.5	S° morning, C afternoon
29.3	29.6	29.8	29.3	28.8	28.5	29.82	33.7	2 00 p	26.9	9 30 a	6.8	S° morning, A afternoon
29.2	29 2	29.0	29.3	29.3	29.2	29.72	33.9	1 50 p	26.3	9 00 a	7.6	A
29.4	29.9	28.7	29.4	29.4	29.4	29.26	32.9	2 00 p	25.8	9 18 a	7.1	A
29.4	30.9	30.6	27.5	29.4	29.4	29.62	33.1	2 40 p	27.2	10 00 a	5.9	S°
30.3	30.0	29.7	29.5	29.5	29.5	30.00	33.0	1 30 p	27.8	9 00 a	5.2	C
30.0	29.8	29.5	29.5	29.4	29 2	29.67	33.5	2 00 p	25.6	9 00 a	7.9	C
28.6	29.6	29.6	29.6	29.6	29.3	29.58	33.0	2 00 p	25.3	9 00 a	7.7	C morning, A afternoon
30.9	30.5	29.6	29.7	30.2	30.0	30.65	35.6	2 00 p	27.4	8 00 a	8.2	A
30.0	30.3	30.0	30.2	30.0	30.0	30.11	33.6	1 00 p	26.5	8 00 a	7.1	C
30.4	31.2	30 1	29.7	29.5	29.1	29.54	31.9	2 00 p	25.7	9 00 a	6.2	A
30.6	28.1	29.8	30.1	30.0	29.1	30.00	36.1	1 20 p	28.4	4 00 a	7.7	S°
30.7	30.4	29.2	29.9	30.2	29.9	30.10	33.6	2 00 p	27.3	7 12 a	6.3	A
30.0	30.0	30.3	30.3	30.0	29.9	30.08	33.7	2 00 p	26.5	8 18 a	7.2	A
31.5	30.3	33.0	33.7	31.5	34.1	31.20	34.3	3 00 p	27.7	6 22 a	6.6	S
30.9	31.0	30.7	30.7	30.7	30.7	30.91	33.4	1 04 p	28.4	2 40 a	5.0	A
30.7	30.4	30.1	30.1	30.0	30.0	30.65	33.8	1 00 p	27 2	8 35 a	6.6	C
30.4	30.2	30.2	30.1	30.2	30.1	30.19	34.8	1 00 p	25.7	9 00 a	9.1	C. S° Late at night
30.4	29.4	30.2	30.5	30.1	28.2	30.58	34.6	2 13 p	27.0	3 00 a	7.6	S°
31.1	30.6	30.3	29.3	30.3	30.3	30.04	34.7	1 48 p	26.1	8 05 a	8.6	A
30.4	30 4	30.4	29.9	29.0	29.7	30.27	34.4	1 00 p	28.4	7 00 a	6.0	A
29.1	30.3	30.3	30.0	30.1	29.7	30.17	33.9	1 00 p	27.1	8 24 a	6.8	A
30.7	30.5	30.1	30.0	29.4	29.2	30.15	33 8	1 15 p	26.7	7 42 a	7.1	A
30.0	29.8	29.7	29.5	29.4	29.1	29.61	34.0	1 09 p	26.0	8 20 a	8.0	C
29.6	29.6	29.6	29.6	29.5	29.5	29.64	33.6	1 00 p	25.8	8 00 a	7.8	C
30.15	30.08	29.97	29.88	29.76	29.63	30.01	34.00		26.43		7.57	

HORIZONTAL MAGNETIC INTENSITY

P. M. 7_p	8_p	9_p	10_p	11_p	夜半 M. N.	平均 Mean	最大 Madximum		最小 Minimum		較差 Range	記事 Remarks.
								h m		h m		
794	785	791	801	806	803	8073	822	3 00 p	785	8 00 p	.0³ 37	S°
758	759	767	779	775	787	7774	822	6 00 a	718	5 25 a	104	S
812	812	814	812	812	807	8032	830	2 14 p	775	11 00 a	55	A
785	785	782	786	796	803	8063	830	4 00 p	779	7 25 p	51	S° morning, A afternoon
810	813	810	806	806	813	8087	823	4 00 p	785	11 25 a	38	A
799	804	805	811	817	807	8008	830	1 20 a	746	9 38 a	84	S° morning, A afternoon
803	797	808	811	814	810	8120	853	0 42 a	792	7 40 p	61	A
821	822	823	821	818	819	8139	830	7 00 a	787	0 47 p	43	A
814	809	827	816	816	816	8197	836	5 23 a	799	11 25 a	37	A
797	774	785	805	790	802	8099	829	2 10 a	770	8 10 p	59	S°
817	817	820	819	818	817	8193	831	8 00 a	802	0 00 a	29	C
820	823	826	825	827	828	8222	831	3 00 p	807	11 00 a	24	C
815	792	802	810	816	818	8212	836	6 15 a	808	10 35 a	28	C morning, A afternoon
793	795	801	796	802	810	8061	828	6 00 a	783	10 52 a	45	A
818	816	818	820	822	820	8141	630	2 10 a	784	10 20 a	46	C
830	822	813	826	823	820	8208	832	6 00 p	806	10 00 a	26	A
...	...	...	...	...	...	8048	833	6 00 a	774	1 20 p	59	S°
810	809	823	811	805	805	8171	831	2 00 p	809	7 50 p	22	A
810	819	815	818	827	824	8110	832	6 00 a	810	1 20 p	22	A
782	770	741	735	714	747	8013	**885**	1 50 p	**712**	10 52 a	173	S
789	790	791	794	793	793	7896	806	2 35 p	736	0 08 a	70	A
802	800	804	805	803	806	8013	826	2 42 p	779	10 33 a	47	C
813	817	812	784	778	790	8165	861	3 25 p	767	10 50 p	94	C. S° Late at night
796	799	790	789	693	804	7933	824	6 00 a	768	11 00 a	56	S°
775	783	791	803	198	806	7927	829	1 00 a	775	9 00 a	54	A
794	797	797	803	814	802	8070	826	2 24 p	794	5 53 p	32	A
807	797	801	804	806	803	8012	810	5 00 a	791	1 37 p	19	A
798	803	809	809	806	804	8017	823	3 00 p	773	10 14 a	50	A
811	812	814	808	802	802	8056	819	3 27 p	786	9 36 a	33	C
806	806	810	810	805	802	8092	830	3 36 p	789	9 18 a	41	C
8027	8009	8031	8040	8035	8058	8072	8309		7796		.0³ 513	

明治三十年四月

鉛直磁力　0.34…………+

日	午前						A. M.					正午	午後					
Day.	1a	2a	3a	4a	5a	6a	7a	8a	9a	10a	11a	Noon	1p	2p	3p	4p	5p	6p
1	342	340	343	339	341	347	343	341	320	307	306	319	328	337	342	338	337	337
2	334	334	336	342	339	347	336	323	306	295	295	295	312	320	331	337	329	327
3	340	340	339	339	339	340	336	323	307	297	298	314	324	328	328	328	329	327
4	328	326	326	326	327	334	334	325	312	300	301	312	326	331	334	332	326	319
5	329	329	329	327	330	332	331	324	319	305	302	305	319	327	328	334	330	323
6	329	331	324	324	327	331	329	323	302	287	295	315	324	334	335	340	341	337
7	338	329	334	338	340	347	347	338	330	323	319	317	320	327	335	343	342	338
8	340	340	340	340	344	344	350	344	334	329	321	320	320	336	339	351	347	344
9	343	343	344	343	343	346	343	336	329	314	318	309	322	324	330	332	333	333
10	338	338	339	338	338	339	343	343	333	321	321	319	316	326	333	326	328	333
11	352	350	348	349	352	350	353	349	341	331	323	323	326	330	336	334	336	336
12	344	344	344	344	346	349	349	345	337	331	324	318	331	337	346	347	347	344
13	348	348	347	347	347	349	352	347	333	321	321	335	343	347	343	343	346	343
14	350	350	353	350	350	355	354	346	334	330	325	335	342	…	…	342	342	346
15	352	357	353	347	349	349	348	340	328	323	333	344	349	351	349	349	345	344
16	345	345	347	343	347	350	347	341	331	323	322	329	336	339	341	344	344	347
17	336	333	338	342	345	346	342	336	325	319	313	317	324	334	339	339	352	340
18	350	341	343	343	347	347	346	339	333	328	333	337	341	344	343	343	342	341
19	343	343	348	340	340	347	343	337	328	328	330	337	342	344	348	348	346	343
20	349	345	355	341	348	353	352	350	341	342	346	342	345	354	336	333	341	333
21	362	362	361	357	349	359	352	353	350	344	340	341	348	352	353	352	351	348
22	352	350	350	350	353	354	354	346	337	333	332	333	342	343	339	343	344	841
23	347	348	354	355	356	356	…	…	…	…	…	339	348	356	357	341	341	340
24	352	356	346	350	355	364	356	350	343	333	333	345	350	348	350	357	359	357
25	366	353	348	343	351	348	348	345	335	343	352	349	348	341	349	351	361	354
26	356	355	356	352	353	353	347	343	337	338	338	334	341	352	352	346	343	345
27	356	354	354	357	359	357	354	349	344	341	344	344	342	344	352	355	353	350
28	352	354	354	353	357	355	352	344	337	328	332	344	350	347	347	348	346	345
29	353	354	355	354	357	358	355	346	338	335	332	342	346	351	354	354	352	352
30	353	355	355	355	359	361	357	347	336	333	310	346	344	346	349	348	348	347
平均 Mean	3460	3449	3454	3443	3463	3489	3467	3401	3303	3235	3238	3286	3350	3397	3420	3426	3427	3405

空中電氣

1	94	142	77	114	296	311	199	160	137	100	43	73	60	34	8	8	13	23
2	-125*	-20*	6*	-80*	-77*	-92*	-133*	-26*	10*	0*	9*	10*	3*	3*	4*	6*	11*	19*
3	6*	14*	-3*	16*	6*	37*	6*	20*	29*	—	7*	11*	17*	—	+	—	+	+
4	12	7	17	22	19	59	77	67	54	43	32	24	25	19	19	17	23	32
5	90	88	57	63	63	73	89	67	63	51	38	22	12	26	22	18	19	24
6	105*	96*	114*	163*	140*	137*	146*	96*	55*	47*	29*	9*	—	±	+	±	±	±
7	—	—	—	±	—	32*	41*	18*	26*	29*	40*	35*	9	-33*	-36*	-22*	-6*	26*
8	120	67	108	73	102	175	111	88	97	20	18	35	23	15	0	1	3	23
9	—	—	±	+	±	—	—	—	…	—	—	—	±	±	±	—	—	—
10	50	68	69	63	50	144	38	44	50	41	69	46	6	4	0	0	3	21
11	38	41	48	53	85	177	147	83	40	15	0	4	-19	-16	-31	-24	-2	13
12	49	40	41	41	55	109	88	32	24	6	-8	35	-37	-21	-1	0	0	0
13	50	50	41	38	56	83	91	71	25	-18	15	26	38	30	24	18	28	32
14	40	35	37	35	55	53	74	53	47	17	72	71	77	19	41	12	16	22
15	80*	68*	71*	81*	77*	95*	124*	96*	83*	47*	33*	7*	-41*	-33*	-24*	-13*	-15*	9*
16	-6*	-11*	-17*	-21*	-10*	22*	28*	39*	34*	25*	9*	12*	21*	10*	-21*	-1*	6*	18*
17	107	65	56	65	95	137	162	123	71	53	36	30	20	18	13	18	16	19
18	48*	48*	45*	40*	-52*	104*	-158*	-182*	113*	-3*	7*	15*	10*	0*	-2*	0*	7*	17*
19	9	16	12	9	18	31	24	20	9	7	6	0	6	16	18	27	27	30
20	40	43	47	52	64	69	67	57	46	36	28	…	15	15	15	19	23	35
21	66	69	78	73	90	111	102	79	48	33	34	24	15	9	6	7	16	27
22	31	20	37	28	32	31	27	19	17	11	9	4	14	-10	-49	-10	29	30
23	112	115	148	230	164	247	286	128	71	44	41	8	10	13	16	18	29	30
24	43	47	52	64	90	138	90	64	57	21	52	34	28	21	9	24	28	41
25	24	0	40	47	88	115	58	36	65	50	36	29	22	22	2	43	40	22
26	32	41	37	34	64	112	101	75	71	52	37	39	…	7	9	7	7	22
27	31	31	31	31	44	46	33	27	25	15	15	21	17	29	0	0	11	12
28	—	±	—	±	—	—	—	—	27*	27*	16*	15*	27*	14*	14*	20*	24*	18*
29	42	36	52	60	83	110	108	55	34	26	27	40	33	24	36	21	4	8
30	49	52	52	60	77	168	191	142	88	51	6	-6	-47	-39	-54	-47	-20	0
平均 Mean	53.8	51.0	54.1	59.8	80 5	119.0	103.0	71.0	54.2	32.2	28.9	23.0	16.0	8.3	5.0	8.4	14.8	22.2

APRIL 1897

VERTICAL MAGNETIC INTENSITY

P. M. 7p	8p	9p	10p	11p	夜半 M. N.	平均 Mean	最大 Maximum	h m	最小 Minimum	h m	較差 Range	記事 Remarks.
334	333	337	343	343	339	3348	347	6 00 a	300	11 40 a	.0^3 47	S°
350	353	350	352	343	349	3306	354	7 35 p	292	11 15 a	62	S
327	330	330	330	330	328	3271	346	0 00 a	295	10 30 a	51	A
315	321	321	326	333	334	3237	334	6 00 a	298	9 45 a	36	S° morning, A afternoon
326	327	327	327	327	327	3243	334	4 00 p	298	10 45 a	36	A
337	339	340	341	341	334	3275	343	4 45 p	**281**	8 40 a	62	S° morning, A afternoon
338	337	346	346	344	341	3357	350	0 45 p	314	11 15 a	36	S° morning, A afternoon
345	345	345	344	343	343	3395	351	4 00 p	320	10 37 a	31	A
334	335	344	340	339	339	3340	347	8 50 p	304	11 50 a	43	A
342	335	343	348	344	348	3347	356	10 16 p	316	1 00 p	40	S°
344	343	345	345	344	343	3410	353	7 00 a	315	NOON	38	C
344	343	346	345	347	345	3417	349	7 00 a	316	11 50 a	33	C
341	335	344	350	351	350	3430	352	7 00 a	317	10 32 a	35	C morning, A afternoon
346	347	350	347	351	351	3453	355	6 00 a	325	11 00 a	30	A
345	344	345	345	345	345	3449	361	2 18 a	323	10 00 a	38	C
337	337	334	337	337	333	3390	350	6 00 a	322	11 00 a	28	A
...	...	...	...	...	...	3344	352	5 00 p	313	11 00 a	39	S°
340	340	345	346	338	340	3412	347	6 00 a	328	10 00 a	19	A
345	349	348	350	353	348	3428	354	10 15 p	328	10 00 a	26	A
343	343	341	347	341	354	3448	355	3 00 a	333	4 00 p	22	S
348	351	352	355	352	352	3518	367	2 18 a	340	11 00 a	27	A
345	348	354	354	354	351	3459	354	6 00 a	332	10 00 a	22	C
347	351	351	340	341	357	3487	...	...	...	...	...	C, S° late at night
357	362	357	355	358	358	3521	366	6 12 a	333	10 00 a	33	S°
349	353	360	361	358	360	3511	**372**	1 15 a	335	9 00 a	37	A
350	353	357	358	362	355	3490	368	10 40 p	333	10 30 a	35	A
356	353	356	356	354	353	3515	359	5 00 a	341	10 00 a	18	A
351	354	357	351	352	350	3483	358	4 56 a	326	10 13 a	32	A
354	356	356	353	352	350	3504	358	6 00 a	332	11 00 a	26	C
348	351	351	351	348	348	3490	361	6 00 a	333	10 00 a	28	C
3427	3438	3459	3463	3457	3457	3409	3536		3187		.0^3 348	

ATMOSPHERIC ELECTRICITY

7p	8p	9p	10p	11p	M. N.	Mean	Maximum	h m	Minimum	h m	Range	Remarks
48	58	37	-48*	-85*	-162*	96.9	**368**	5 40 a	-215	11 00 p	583	●°9.30p – ●10.10p –
31*	43*	38*	40*	29*	17*	...	80	9 22 p	-212	7 15 a	293	– ● – ●°10.45a – 5.20p ●°9,30p –
+	+	–	–	–	–	...	180	7 18 p	-207	9 25 a	387	– ●° – 9.25a ⚡E 7.p – 7.40p ●°8p –
46	70	90	96	96	107	44.7	116	11 40 p	-96	0 00 a	212	– ●°3.55a
33	44	62	91	102	108	55.2	117	11 22 p	4	1 00 p	113	●°0.25p ⚡W 10.30p
+	±	±	–	–	–	...	190	4 50 a	-216	M.N	406	●°1.10p – ●8.15p –
35*	44*	54*	59*	47*	73*	...	98	11 50 p	...	...	...	– ● – ●°3.20a – 9.20a ⌇ 3.a – 4.a
44	44	61	51	31	—	57.0	220	6 12 a	-6	2 50 p	226	●11.35p –
19*	26*	33*	40*	57*	59*	...	...	...	...	...	...	-● -1.45a ●4.10a- ●^{2}5p- ●5.13p- ●°5.45p-6.25p
0	44	41	29	26	44	39.6	156	6 00 a	-41	7 18 p	197	●°7.10a – 7.20a ⌇ 8.p
6	26	21	29	29	31	31.8	254	6 35 a	-103	2 37 p	357	⌇ 3.p
0	29	38	50	62	44	28.2	124	6 25 a	-59	0 28 p	183	—
26	21	50	52	36	12	37.3	112	6 37 a	-28	10 00 a	140	—
50	62	74	63	86	65	49.0	90	6 37 a	9	10 10 a	81	●° 4.08p – 6.30p ⌈8.15p—8.20p ●°9.50p –
11*	3*	0*	0*	-2*	-5*	...	146	7 30 a	-47	4 20 p	193	●0.40p— ●°4.20p – ●^{2}6p — ●6.05p—6.25p,
6*	15*	25*	52*	74*	101*	...	104	11 37 p	-25	2 50 p	129	– ●° – 3.30a ●°5.30 – 6.10a.
30	64	86	76	56	65	61.7	168	6 45 a	5	3 32 p	163	—
32*	37*	26*	26*	22*	15*	...	66	0 00 a	-216	8 33 a	282	●°3.55a – 0.15a
12	19	-9*	26	33	39	18.0	39	M.N	-10	9 00 p	49	●°11.50a –
58	59	74	84	82	75	48.0	87	9 43 p	12	1 48 p	75	– ●°0.30a ●°2.30a – 3.a.
31	12	9	40	40	36	44.0	118	6 25 a	8	8 18 p	110	●°5.15p – ●7.p – 9.50p
45	52	53	47	63	80	25.4	96	11 55 p	-100	3 30 p	196	●°1.50a – 4.20a ●°8.30a – 11.50a
41	36	25	31	33	37	79.6	406	6 30 a	0	0 12 p	406	—
24	45	65	78	65	38	50.9	145	5 55 a	12	3 32 p	133	—
14	38	29	22	32	22	37.3	198	5 55 a	-162	0 24 a	360	●°0.30a – 8.50a ●°5.50p –
16	21	22	22	52	36	39.9	121	6 20 a	0	1 42 p	121	– ●° – 2.a
19	23	18	42	–	–	23.7	47	6 30 a	-165	10 39 p	212	●°9.40a – 10.30.a ●°9.50p – ●11.10p –
27*	25*	31*	32*	33*	41*	...	55	7 24 p	**-295**	5 52 a	350	-●°0.35a- ●2.20a- ●^{2}5.10a- ●6a- ●°7.30a-9.10a
29	42	58	41	44	53	44.5	136	6 46 a	-14	5 35 p	150	—
14	20	22	21	36	73	36.6	219	6 36 a	-120	2 27 p	339	—
27.9	39.5	46.7	49.5	52.8	53.6	45.1						

明治三十年五月

4°W ·········+

日	午前 A. M.											正午	午後					
Day.	1_a	2_a	3_a	4_a	5_a	6_a	7_a	8_a	9_a	10_a	11_a	Noon.	1_p	2_p	3_p	4_p	5_p	6_p
1	29.3	29.2	29.0	29.5	28.9	28.2	27.9	27.4	27.7	30.6	32.4	32.8	32.2	31.5	30.9	30.8	30.8	30,6
2	29.1	29.0	29.0	28.5	28.1	27.5	27.4	26.7	27.8	30.0	31.6	31.9	31.5	31.0	30.9	30.3	29.6	30,5
3	28.2	28.8	28.5	28.6	28.6	27.2	27·3	27.8	30.1	32.7	33.0	32.7	32.6	32.0	31.3	30.8	30.3	29,7
4	29.5	29.2	29.1	28.5	28.5	27.8	27.0	26.3	27.5	29.5	31.9	33.2	32.9	32.6	31.3	30.4	30.0	29,4
5	29.8	29.5	29.3	29.3	28.6	28.0	27.4	28.2	27.7	28.6	31.2	···	···	33 3	31.2	29.7	29.0	29,4
6	29.4	28.7	29.4	29.0	28.2	26.8	25.9	25.3	26.6	30.3	32.8	33.3	34.0	32.7	31.5	30.5	28.5	29,4
7	28.7	29.0	29.4	29.1	29.1	27.7	26.8	27.1	28.4	31.2	33.1	32.8	32.7	32.4	31.2	30.6	29.9	29,1
8	29.6	29.6	29·6	29.6	29.5	28.0	27.3	27.3	28.4	31.3	31.8	33.2	33.2	31.8	30.5	29.8	29.5	29,6
9	29.8	29.8	29·4	29.4	29.2	28.2	27.6	26.7	27.3	29.1	30.4	32.6	33.5	33.7	32.0	···	···	···
10	···	···	···	···	···	···	···	···	···	···	30.3	32.9	32.8	32.5	31.5	30.3	29.3	29,1
11	29.4	29.0	28.5	28.1	27.9	27.9	27.1	26.5	26.3	27.7	29.4	31.9	32.8	32.7	32.1	31.5	30.0	29,4
12	29.6	29.5	29.2	29.2	28.1	27.4	27 1	27.7	29.2	31.3	31.4	32.3	32.7	32.1	31.3	30.5	29.9	29,8
13	28.9	28.9	28.5	28.2	27.7	26.7	26.1	26.9	28.6	30.6	31.3	31.9	31.9	31.3	29.7	···	···	···
14	···	···	···	···	···	···	···	···	···	30.6	31.3	31.4	32.3	31.0	31.0	···	···	···
15	29.0	29.3	29.1	29.0	28.1	26.6	26.8	27.6	28.5	31.2	32.2	32.7	32.8	32.5	31.2	30.2	29.7	29,4
16	29.0	28.9	28.9	28.9	28.3	27.3	26.1	26.1	26.7	28.3	30.2	31.1	31.8	31.7	30.5	29.8	29.2	29.0
17	29.1	28.9	28.9	29.1	28.6	27.3	26.4	26.3	27.3	30.7	32.5	33.5	33.8	33.1	32.5	32.0	31.0	30.7
18	27.9	28.2	26.4	27.3	26.9	27.9	26.6	27.3	29.5	31.0	31.3	32.0	32.0	31.1	30.0	29.4	29.2	29.1
19	29.0	28.5	28.2	28·5	27.9	27.2	26.3	25.9	26.5	···	···	···	···	···	···	···	30.5	29 4
20	29.0	28.3	27.8	27·2	25.8	27,2	26.5	28.6	30.1	30.8	30.9	33.0	33.5	32.6	32.1	30.8	30.1	29.3
21	29.2	28.2	28.3	27.9	27.7	27.7	26.6	27.7	29.1	31.7	33.4	32.3	33.1	34.0	33.2	34.4	32.9	27.0
22	2.91	28.6	28.8	28 6	27.7	26.7	27.0	28.0	28.6	30.6	30.8	32.5	35.6	33.5	32.6	32.6	30.7	30.4
23	2.96	29.1	29.6	28.4	29.0	28.2	28.2	28.4	29.4	31.2	32.7	32.5	33.0	32.8	31.8	31.0	29.6	27.8
24	2.86	28.7	28.3	28.4	28.0	27.2	26.2	25.8	26.9	27.8	30.5	31.2	31.7	32.3	31.8	30.8	30.2	29.2
25	2.83	28.1	28.1	28.3	27.7	27.1	26.5	26.9	28 9	29.2	30.5	31.2	31.7	30.5	30.2	29.9	29.8	29.5
26	28.2	28.0	27.6	27.0	26.6	25.8	26.1	26.8	28.3	··	31.1	31.9	31.7	31.6	30.4	29.5	28.9	28.6
27	28.2	28.2	28.1	26.2	26.9	26.6	25.9	25.7	27.6	30.2	31.0	32.4	32.1	31.5	30.6	29.1	28.1	27.8
28	27.4	27.5	27.7	26.9	26.5	26.1	25.0	25.8	28.0	32.1	33.9	33.9	33.9	33.2	31.8	30.2	29.5	29.2
29	28.9	28.6	28.0	27.8	26.9	25.8	24.9	25.2	26.6	28.6	30.3	31.5	31.8	31.7	30.5	30.1	29.0	28.4
30	28.0	27.8	27.8	28.0	27.7	26.8	26.4	27.1	28.0	29.9	30.9	32.9	34.0	34.5	34.5	33.8	31.7	30.2
31	29.3	28.7	28.7	28.7	28.2	27.5	27.2	26.9	27.5	29.4	28.4	39·3	29.6	39.4	26.7	27.0	26.7	26.6
平均 Mean	28.93	28.75	28.59	28.39	27.96	27.26	26.68	26.90	28.04	30·22	31.42	32.30	32.66	32.22	31.23	30 59	29.77	29.21

水平磁力 0.29·········+

日	午前 A. M.											正午	午後					
Day.	1_a	2_a	3_a	4_a	5_a	6_a	7_a	8_a	9_a	10_a	11_a	Noon.	1_p	2_p	3_p	4_p	5_p	6_p
1	804	802	803	806	805	804	802	799	799	799	812	819	824	827	821	811	805	802
2	808	808	810	814	814	817	818	814	814	817	825	838	849	853	847	838	829	797
3	804	812	815	819	818	818	809	804	792	795	811	833	837	828	826	826	816	816
4	820	820	819	818	818	817	813	801	798	799	798	804	816	822	821	812	805	803
5	815	813	814	818	822	821	810	788	782	787	794	805	817	816	820	821	810	806
6	824	827	823	823	823	824	817	810	802	804	810	817	813	813	805	806	807	812
7	807	810	812	802	803	804	800	792	782	782	784	790	796	792	802	797	791	789
8	799	799	799	801	802	801	793	787	787	792	799	806	816	822	822	818	810	805
9	809	810	813	814	812	812	804	793	781	778	778	787	810	812	817	···	···	···
10	···	···	···	···	···	···	···	···	···	···	808	820	831	839	835	833	831	820
11	824	830	835	836	831	831	822	811	805	814	820	828	829	828	824	821	825	825
12	814	816	814	816	818	813	805	806	809	814	821	830	837	839	838	832	827	826
13	826	825	828	830	829	828	819	814	819	829	835	840	847	839	837	···	···	···
14	···	···	···	···	···	···	···	···	···	823	830	835	834	836	845	···	···	···
15	797	800	808	814	813	809	805	797	802	786	804	808	812	813	809	805	803	799
16	811	811	811	811	811	805	804	794	797	797	805	812	818	817	818	817	813	811
17	819	819	818	817	819	820	814	809	806	798	806	811	819	819	817	810	805	806
18	800	790	816	804	809	787	786	785	785	786	805	816	816	816	818	814	810	802
19	818	818	825	823	823	817	811	804	797	···	···	···	···	···	···	···	794	799
20	826	832	832	842	838	820	802	781	771	781	794	796	796	802	796	800	802	802
21	821	821	823	819	819	816	810	809	816	792	806	830	842	823	809	769	761	803
22	785	794	803	803	805	796	784	777	774	753	776	790	757	771	791	790	792	788
23	821	821	828	839	813	814	810	800	793	788	794	812	814	815	817	821	817	820
24	···	···	···	813	813	806	802	796	784	···	···	···	···	···	···	···	···	···
25	···	···	···	···	···	···	···	···	···	···	···	···	···	···	···	···	···	···
26	···	···	···	···	···	···	···	···	···	···	···	···	···	···	···	···	···	···
27	···	···	···	···	···	···	···	···	···	···	···	···	···	···	···	···	···	···
28	···	···	···	···	···	···	···	···	···	808	815	821	827	833	833	829	827	827
29	832	834	833	835	840	835	825	821	817	818	823	835	835	831	833	833	829	823
30	828	828	833	833	834	825	818	825	845	862	879	871	854	830	797	792	793	813
31	801	809	804	806	804	803	800	800	804	812	820	831	828	824	824	817	816	814
平均 Mean	8130	8145	8175	8182	8174	8137	8073	8007	7984	8006	8097	8187	8221	8215	8201	8136	8091	8087

MAY 1897.

MAGNETIC DECLINATION

P. M. 7p	8p	9p	10p	11p	夜半 M. N.	平均 Mean	最大 Maximum	h m	最小 Minimum	h m	較差 Range	記事 Remarks
30.5	30.2	30.2	29.9	29.8	29.5	30,00	33.0	11 50 a	27.4	8 00 a	5.6	C
31.9	31.5	30.7	29.3	28.4	28.3	29.61	32.2	11 50 a	26.7	8 00 a	5.5	C morning, A afternoon
29.7	29.7	29.7	29.7	30.0	29.1	29.92	33.6	10 20 a	27.0	5 55 a	6.6	A morning, C afternoon
29.2	29.4	29.5	30.0	30.1	29.5	29.68	33.5	0 18 p	26.3	8 00 a	7.2	A
29.9	30.0	30.2	29.9	30.2	30.0	29,56	...	... ...	...	... ...	...	C
30.3	29.6	30.8	29.7	30.0	29.9	29.69	34.0	1 00 p	24.4	8 18 a	9.6	A
29.7	29.7	29.4	29.6	30.0	29.9	29.86	33.1	11 00 a	26.6	7 40 a	6.5	C
29.6	30.1	29.9	30.1	30.1	29.9	29.97	33.3	0 28 p	27.0	7 20 a	6.3	C
...	...	...	...	...	...	29.91	...	... ...	...	... ...	...	C
30.5	30.5	30.2	29.9	29.6	29.3	30.62	...	... ...	...	... ...	...	C
29.6	29.9	29.7	29.6	29.4	29.9	29.43	32.8	1 00 p	25.7	8 15 a	7.1	C
30.2	30.1	29.6	29.8	29.6	29.3	29.87	32.7	1 00 p	27.0	6 20 a	5.7	C
...	...	...	...	...	...	29.15	...	... ...	...	... ...	...	C
30.4	30.6	30.6	30.0	29.5	27.7	30.53	...	... ...	...	... ...	...	A
29.4	29.4	29.4	29.6	29.4	29.3	29.68	32.8	1 00 p	25.7	6 43 a	7.1	A
29.5	29.5	29.5	29.8	29.5	29.0	29.11	32.0	1 28 p	25.9	7 25 a	6.1	C
30.0	30.0	29.7	27.4	29.4	27.3	29.81	33.8	1 00 p	24.9	8 08 a	8.9	C
29.1	29.2	29.4	29.2	29.2	28.9	29.09	32.3	0 26 p	26.4	7 05 a	5.9	S
29.4	29.3	29.4	29.4	29.6	29.1	28.48	...	... ...	...	... ...	...	A
28.1	29.5	29.9	29.3	29.5	29.3	29.55	33.5	0 20 p	25.3	6 14 a	8.2	A
29.5	28.2	29.2	28.5	29.5	29.2	29.94	35.4	3 46 p	24.9	5 49 p	10.5	S[1]
30.7	30.4	30.0	30.4	30.3	30.0	30.17	**35.7**	0 46 p	25.5	6 21 a	10.2	S°
29.0	29.6	29.0	29.6	29.7	29.4	29.94	33.4	1 24 p	27.0	6 34 a	6.4	A
29.0	30.2	29.9	29.3	29.2	29.0	29.17	32.4	2 12 p	25.6	7 42 a	6.8	C
29.6	29.6	29.6	29.3	29.0	28.7	29.09	31.7	1 00 p	26.5	7 00 a	5.2	C
28.9	29.2	29.4	29.4	29.1	28.3	28.80	31.9	Noon	25.4	6 18 a	6.5	C
28.7	29.0	28.7	29.0	29.1	28.8	28.73	32.5	0 22 p	25.4	7 49 a	7.1	A
29.5	29.5	28.6	28.4	29.2	29.2	29.29	34,0	11 34 a	25.0	7 00 a	9.0	C
28.7	28.9	29.0	29.3	29.2	29.0	28.70	32.0	0 32 a	24 9	7 00 a	7.1	A
30.1	30.2	29.8	30.2	29.9	30.2	30.02	34.9	2 28 p	25.8	7 22 a	9.1	A morning, S° afternoon
26.7	26.7	26.7	26.7	26.2	26.2	27.71	29.6	1 00 p	26.0	11 38 p	3.6	A
29.57	29.64	29.58	29.39	29.44	29.08	29.50	33.04		25.93		7.11	

HORIZONTAL MAGNETIC INTENSITY

P. M. 7p	8p	9p	10p	11p	夜半 M. N.	平均 Mean	最大 Maximum	h m	最小 Minimum	h m	較差 Range	記事 Remarks
805	806	807	806	805	805	8074	827	2 05 p	799	10 00 a	.0[3] 28	C
788	795	808	804	797	804	8169	853	1 32 p	783	7 22 p	70	C morning, A afternoon
816	821	825	817	816	825	8166	837	1 00 p	790	9 32 a	47	A
808	808	809	809	807	815	8108	827	0 20 a	794	10 38 a	33	A
804	804	809	816	814	818	8093	824	5 12 a	781	8 23 a	43	A
805	816	802	818	823	807	8138	828	2 18 a	798	8 50 p	30	S°
791	791	790	790	789	795	7950	812	8 00 a	777	10 12 a	35	A
807	805	804	803	803	805	8035	822	3 00 p	785	8 46 a	37	A
...	...	...	...	...	...	8020	...	......	...	......	......	C
801	797	805	812	816	826	8196	...	......	...	......	......	A
820	822	818	809	812	813	8222	837	3 16 a	805	8 52 a	32	A
823	819	818	818	816	820	8204	841	1 50 p	802	7 21 a	39	C
...	...	...	...	...	...	8297	...	......	...	......	......	A
...	821	809	793	794	819	8217	...	......	...	......	......	S°
802	805	805	809	806	809	8050	822	0 01 a	786	10 00 a	36	A
811	811	811	811	812	816	8(?98	818	4 20 p	794	8 05 a	24	C
810	817	807	813	794	805	8116	822	5 40 a	788	11 05 p	34	A
805	810	815	846	816	816	8051	818	3 00 p	779	6 40 a	39	S morning, A afternoon
804	808	814	816	817	818	8121	...	......	...	......	......	A
801	810	814	816	816	818	8078	847	3 50 a	768	8 56 a	79	S°
796	796	790	788	786	784	8054	843	1 11 p	**748**	5 32 p	95	A morning, S afternoon
795	812	807	810	813	813	7908	813	M.N.	753	10 00 a	60	A morning, S° afternoon
819	816	817	820	...	...	8140	840	3 57 a	786	10 20 a	54	A
...	...	...	...	...	...	8023	...	......	...	......	......	—
...	...	...	...	...	...	...	...	......	...	......	......	—
...	...	...	...	...	...	...	...	......	...	......	......	
...	...	...	...	...	...	...	...	......	...	......	......	
827	828	830	831	828	831	8263	...	......	...	......	......	A
825	827	827	829	828	828	8290	840	5 00 a	815	9 27 a	25	A
833	814	790	783	779	788	8228	**832**	11 13 a	767	9 23 p	115	A morning, S afternoon
814	816	818	820	819	821	8135	831	Noon	786	0.01 a	45	A
8087	8110	8100	8103	8086	8125	8121	8326		7850		.0[3] 476	

明治三十年五月

鉛直磁力　0.34........+

日	午前 A. M.											正午	午後					
Day	1_a	2_a	3_a	4_a	5_a	6_a	7_a	8_a	9_a	10_a	11_a	Noon	1_p	2_p	3_p	4_p	5_p	6_p
1	352	351	354	355	358	356	355	353	347	340	348	359	362	360	357	353	353	355
2	363	363	364	366	368	368	367	364	346	350	359	369	374	370	366	363	364	352
3	376	380	381	381	384	378	371	365	354	356	370	387	392	388	387	387	387	388
4	387	387	388	388	389	388	385	374	365	357	361	369	372	379	379	372	371	371
5	385	385	383	386	387	386	374	366	360	358	362	373	374	375	379	379	373	373
6	386	386	385	386	386	386	378	369	360	349	356	365	368	373	370	371	371	379
7	370	372	373	369	372	372	369	364	358	357	353	358	361	358	362	362	361	362
8	371	369	371	372	372	372	363	359	348	347	350	360	368	373	371	364	363	361
9	370	370	372	372	371	371	363	355	346	347	348	358	363	366	367	...	...	...
10	...	...	...	...	...	...	...	...	...	...	353	359	362	359	359	361	363	359
11	371	371	373	371	371	370	363	358	351	351	351	355	357	358	358	358	362	362
12	370	371	371	371	371	370	359	359	359	343	346	346	350	349	346	347	346	346
13	354	353	356	352	356	352	344	334	333	333	338	344	349	346	345	...	...	...
14	...	...	...	...	...	..	...	...	...	330	330	334	336	334	344	...	...	...
15	331	336	343	344	343	337	331	325	322	313	317	322	329	335	331	329	331	329
16	332	333	336	336	339	332	331	327	325	321	324	335	335	335	333	333	333	333
17	333	333	333	337	337	335	332	326	320	316	324	329	336	335	336	336	336	336
18	336	332	343	336	336	330	323	323	320	321	328	349	346	346	349	346	346	342
19	342	342	345	342	345	344	338	333	327	...	...	...	...	...	...	...	337	350
20	364	366	364	367	364	356	345	344	340	347	354	352	352	358	350	355	359	359
21	366	366	366	363	368	366	359	356	355	335	345	360	362	352	351	348	352	381
22	378	380	378	381	384	380	377	370	367	359	352	359	336	351	367	373	375	374
23	377	377	378	378	367	372	369	363	359	347	341	355	362	366	374	370	369	373
24	374	363	370	367	372	370	365	359	352	336	338	342	359	362	369	370	370	370
25	375	372	369	372	372	373	360	359	357	357	362	365	362	366	369	365	362	360
26	377	373	374	374	375	373	370	370	370	...	365	371	375	378	381	378	375	370
27	377	380	380	383	384	380	373	368	365	365	368	370	370	373	374	368	370	370
28	372	372	375	378	380	380	378	369	366	360	369	368	366	372	372	371	371	371
29	376	378	375	378	383	381	375	370	369	360	360	361	363	366	367	366	366	364
30	374	375	377	378	378	364	361	354	355	354	355	349	340	341	334	349	352	360
31	381	382	379	379	379	376	371	365	357	351	345	356	360	362	362	360	362	362
平均 Mean	3662	3661	3674	3677	3687	3661	3603	3552	3501	3450	3491	3560	3580	3595	3603	3605	3600	3611

空中電氣

日 Day	1_a	2_a	3_a	4_a	5_a	6_a	7_a	8_a	9_a	10_a	11_a	Noon	1_p	2_p	3_p	4_p	5_p	6_p
1	83	52	44	39	55	60	37	29	12	12	4	-6	-37	-53	-47	-27	12	-14
2	21	23	27	27	32	36	36	17	-2	-6	- 8	4	4	- 1	- 8	15	21	23
3	±	±	+	+	+	—	—	±	+	+	+	+	±	±	±	±	±	±
4	—	5	11	9	43	70	64	29	13	7	21	13	11	9	14	21	42	13
5	4	17	30	31	42	67	72	61	73	13	18	18	11	4	7	7	19	11
6	33	40	32	36	52	86	56	43	16	11	19	27	9	5	6	9	15	16
7	28	30	31	26	28	28	35	15	31	23	3	- 5	- 5	-18	- 6	-18	-13	-28
8	4	4	4	13	7	14	23	15	9	12	12	12	18	15	14	9	- 5	-16
9	-9	4	6	2	13	26	19	17	14	21	23	13	-28	-20	-18	4	- 5	-10
10	-31	-16	-10	-10	5	24	13	2	- 1	7	10	9	1	1	- 3	0	0	-9
11	7	15	24	14	27	42	63	31	20	13	9	5	22	22	- 2	-24	—	±
12	-31	6	14	10	5	23	25	14	14	15	14	11	21	20	20	21	22	20
13	4	3	3	8	20	41	39	27	20	13	10	0	5	8	14	18	15	16
14	67	64	43	49	67	67	52	26	13	9	21	7	27	10	-25	- 4	-30	0
15	42	41	47	56	136	131	121	-52	-33	-63	-93	-68	-90	-21	-14	-19	-27	0
16	±	+	+	±	—	—	+	+	+	5*	- 1*	- 7*	9*	- 6*	18*	11*	30*	21*
17	74	36	68	45	90	109	94	70	65	54	52	25	12	10	12	12	12	15
18	39	46	65	66	66	99	127	68	39	30	14	12	20	15	24	33	18	23
19	40	34	43	47	68	104	61	34	19	15	9	16	13	17	19	17	18	27
20	23	19	21	20	63	84	56	40	23	15	11	19	19	19	19	6	4	9
21	27	26	38	27	35	58	33	22	16	11	12	17	28	17	10	11	11	12
22	-16*	—	—	—	—	—	—	—	—	—	—	—	-52*	-31*	-19*	-10*	- 2*	9*
23	48	64	118	76	118	217	229	107	74	48	43	34	27	5	8	-2	8	5
24	44	31	28	15	75	28	10	57	57	37	25	18	14	11	29	43	44	35
25	42	46	18	43	43	101	64	50	12	25	29	25	30	24	35	54	+	±
26	59	66	55	75	107	129	126	59	38	29	25	24	21	16	25	13	±	13
27	50	57	38	46	87	96	62	35	19	16	24	19	11	21	22	5	6	11
28	35	31	39	41	73	100	129	63	9	-50	-107	- 3	7	-49	-94	-19	-13	9
29	20	23	27	35	54	118	112	41	27	16	-13	-38	-31	-20	6	31	17	35
30	0	15	9	2	31	75	38	44	49	27	23	24	23	36	30	30	21	29
31	34	29	49	37	68	30	135	63	30	26	27	20	15	9	16	13	14	23
平均 Mean	27.7	29.0	32.9	32.0	53.9	73.3	70.0	36.7	25.2	13.8	8.5	9.0	5.3	4.0	4.0	7.1	8.1	10.3

MAY 1897.

VERTICAL MAGNETIC INTENSITY.

P. M.					夜半	平均	最大		最小		較差	記事
7	8	9	10	11	M.N.	Mean	Maximum	h m	Minimum	h m	Range	Remarks.
357	360	361	360	369	360	3552	363	1 24 p	340	10 00 a	0³ 23	C
359	366	376	373	370	374	3647	374	1 15 p	346	9 00 a	28	C morning, A afternoon
385	389	389	387	391	393	3811	384	5 00 a	354	9 20 a	30	A
374	374	375	376	378	384	3768	389	5 00 a	356	10 44 a	33	C
371	377	379	385	383	385	3766	387	5 00 a	358	10 00 a	31	C
371	373	369	373	378	373	3734	386	5 00 a	349	10 00 a	37	A
361	361	361	360	361	369	3636	374	3 38 a	351	10 24 a	23	C
361	361	360	361	361	368	3636	373	2 00 p	347	9 18 a	26	A
...	...	...	...	...	...	3626	...	...	...	...	...	C
350	354	361	366	367	374	3605	...	...	...	...	...	C
358	861	362	358	362	370	3617	374	0 00 a	351	10 00 a	23	C
343	343	343	3 3	345	354	3538	371	4 00 a	343	10 00 a	28	C
...	...	...	...	...	...	3459	...	...	...	...	...	C
330	334	332	329	330	344	3339	...	...	...	...	...	A
328	329	329	329	329	335	3303	344	4 00 a	309	10 18 a	35	A
331	329	329	329	329	333	3314	339	5 00 a	317	10 18 a	22	C
331	335	331	331	328	335	3317	337	7 00 a	316	10 00 a	21	A
339	343	343	343	342	345	3378	349	3 00 p	303	9 31 a	41	A
350	356	358	357	358	367	3465	...	...	...	...	...	A
359	360	360	360	360	366	3567	372	3 53 a	340	9 00 a	32	A
374	367	367	362	360	374	3606	381	6 00 p	332	10 18 a	49	A morning, S afternoon
371	380	371	369	369	375	3698	388	1 40 a	336	1 00 p	52	A morning, S° afternoon
365	363	369	369	367	370	3667	383	3 21 a	338	10 27 a	45	A
363	363	365	366	366	370	3625	374	1 00 a	336	10 00 a	38	C
360	363	366	369	366	375	3657	375	1 00 a	356	9 20 a	19	C
367	367	368	367	367	373	3721	383	2 45 p	365	11 00 a	18	C
370	368	368	367	368	376	3723	384	5 00 a	364	10 28 a	20	C
366	366	365	368	366	372	3705	381	5 13 a	360	10 05 a	21	A
363	366	364	364	364	369	3687	383	5 00 a	358	11 18 a	25	A
375	366	361	363	360	375	3604	378	5 00 a	334	3 00 p	44	A morning, S afternoon
362	360	365	364	362	366	3653	382	2 00 a	340	10 26 a	42	A
3584	3598	3602	3603	3602	3663	3598	3734		3425		0³ 310	

ATMOSPHERIC ELECTRICITY.

7	8	9	10	11	M.N.	Mean	Maximum	h m	Minimum	h m	Range	Remarks.
0	8	12	13	16	17	12.4	101	0 26 a	-79	2 00 p	180	—
13	21	21	21	-36*	16	15.3	51	7 18 a	-72	11 12 p	123	●° 11p.–
–	+	±	±	±	–	...	>456	1 45 p	-417	10 25 p	>873	–●°–●7a–●°7.30p–●²11.25p– ⫽11p–M.N.
45	41	46	+	+	±	26.3	158	10 43 p	-388	0 38 p	546	–●²–●°0.35a–2.55a.,●11p– ⫽2p < at z 10.14p
20	22	25	40	47	29	28.7	221	0 25 a	-58	0 43 p	279	–●°1.05a
14	19	20	35	29	27	27.3	90	6 13 a	2	2 08 p	88	—
-30	±	±	-9	-12	-13	5.5	111	7 09 p	-350	8 40 p	461	●°3.50p–●6p–●°9.10p–
-21	-18	-16	-23	-19	-3	2.1	25	6 36 a	-30	9 42 p	55	–●°–0.30a ●°7p–10.25p
-5	-20	-28	96	-26	-25	-5.3	29	10 45 a	-117	10 00 p	146	●° 0.45p–
-14	-12	12	-5	-14	-10	-3.1	32	6 10 a	-68	0 35 a	100	–●°1.40a
-13	1	-9	-24	-42	0	9.1	116	6 10 p	-283	5 17 p	399	●°3.05p–
5	3	1	14	4	0	10.5	33	5 20 a	-48	0 48 a	81	–●°–2.40a ●°8.50a–9.10 a
9	9	-8	43	45	51	17.2	56	M.N.	-24	8 43 p	80	●°6.30p–8.20p
0	33	36	41	39	38	27.1	83	5 55 a	-35	3 27 p	148	—
16	15	19	19	17	2	6.3	178	5 25 a	-175	11 21 a	353	●°4.05p–7.15p ●°11.40p–
31*	34*	34*	47*	55*	82*	...	>245	3 35 a	<-179	3 56 a	>415	●°–●3.05a–●°5.50a–3.20p
22	30	31	36	38	38	43.7	148	5 32 a	4	1 21 p	144	—
14	23	24	30	38	38	40.5	140	7 17 a	4	11 42 a	136	—
29	26	23	25	26	28	31.6	112	5 50 a	3	0 18 p	109	—
19	25	25	20	21	24	25.1	96	5 36 a	-4	4 40 p	100	—
15	15	4	10	14	5	19.7	67	5 48 a	-12	9 14 p	79	—
10*	20*	29*	48*	63*	48*	...	70	10 53 p	<-179	2 00 a	>249	⫽ 2a–noon
23	31	32	32	38	32	59.0	>229	6 40 a	-16	3 30 p	>245	—
24	15	24	43	40	63	36.2	81	5 19 a	-95	1 13 p	176	●° 3.50a–6.25a ●° noon –1.15p ●°4.50p–8.20p
±	–	24	39	47	52	41.7	...	...	...	...	...	●°0.30a–355a.,10.05a–11.15a.●²5.50p.–●6.10p.–7.35p TN4.35p–T<N5.07p,–T<²NW5.55p–W.6.00p. [T<²S6.10p.–T<SE7.10p.– [<SE7.40p–9.00p
39	116	79	46	38	68	55.0	166	8 04 p	-103	5 32 p	269	<S 8.30p–9p
19	23	28	30	32	34	33.0	109	6 26 a	-7	4 24 p	116	—
17	20	17	17	17	19	11.6	150	6 50 a	<-156	11 00 a	>306	⫽noon –5p
12	17	8	14	16	17	21.4	159	6 42 a	<-162	0 48 p	>321	●°3.30p
18	20	28	28	31	33	27.2	72	5 51 a	-3	3 52 a	75	–●°–8a
25	20	29	24	29	22	32.8	>172	6 18 a	8	1 48 p	164	●°2.10p–2.20p
11.7	19.3	17.9	17.1	19.6	22.1	23.4						

明治三十年六月

偏角 4°W+

日 Day.	午前 A.M. 1	2	3	4	5	6	7	8	9	10	11	正午 Noon.	午後 1	2	3	4	5	6
1	26.0	26.1	25.6	25.3	24.2	22.6	22.2	22.9	23.8	25.9	28.8	29.0	28.4	28.1	27.3	26.6	25.9	25.9
2	26.0	26.1	25.4	25.3	24.8	22.9	22.5	22.6	23.6	25.3	26.0	27.9	28.8	28.8	27.9	27.6	27.3	26.6
3	25.6	25.4	25.7	25.6	24.5	22.9	22.3	23.0	24.7	27.2	28.7	29.6	29.3	29.0	29.0	28.5	27.6	26.2
4	25.1	24.6	24.3	24.9	25.2	24.5	23.3	24.9	26.3	27.4	28.8	29.7	30.7	30.7	30.4	27.3	26.1	25.7
5	25.7	25.5	25.5	24.9	24.8	23.3	23.1	23.4	24.9	26.3	27.7	28.3	29.2	29.2	28.5	28.0	27.3	26.8
6	24.9	24.9	24.8	25.1	24.8	24.5	23.7	23.4	24.0	25.1	26.8	28.2	29.7	29.4	28.6	27.4	26.4	26.3
7	26.3	26.3	25.8	25.7	25.1	24.3	23.7	23.7	24.5	...	27.3	28.6	30.1	30.1	29.5	27.9	26.6	25.8
8	26.4	26.2	26.2	26.1	25.2	25.0	24.9	24.6	24.7	25.6	26.5	27.5	29.0	29.0	28.0	27.8	27.2	26.2
9	26.4	26.2	26.1	25.6	25.3	24.6	24.3	24.9	24.9	...	...	...	...	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	28.3	29.8	30.5	30.5	29.6	28.3	27.8	26.7	26.5
11	25.9	25.3	25.4	25.1	25.3	24.2	22.8	23.3	25.4	26.5	27.6	28.5	28.7	28.8	28.4	27.9	27.6	27.6
12	26.5	26.2	25.9	25.7	25.0	24.7	24.7	24.8	26.2	28.2	29.4	30.2	29.7	29.1	28.4	27.6	27.3	26.6
13	26.5	26.4	26.4	26.2	25.1	23.3	23.6	24.5	26.5	28.1	29.7	30.0	29.6	28.7	28.4	27.6	27.3	26.9
14	26.5	26.0	26.2	26.0	24.8	22.9	22.8	24.1	25.9	28.8	30.3	30.6	30.5	30.3	28.8	27.2	26.6	26.5
15	26.9	26.6	26.7	26.3	26.1	24.5	23.9	24.3	24.9	26.3	27.9	28.5	29.8	30.4	29.2	28.0	27.3	27.0
16	27.0	26.4	26.6	27.1	24.9	23.3	22.6	24.5	26.4	27.3	27.9	30.7	30.7	28.9	27.7	28.6	28.9	28.5
17	25.2	25.7	25.1	24.3	22.9	25.2	24.9	25.4	28.0	31.4	33.3	31.7	32.5	34.5	32.5	32.9	30.7	28.2
18	27.9	27.6	27.3	26.6	26.4	24.9	24.2	24.0	24.8	26.6	28.0	30.7	30.7	29.5	30.7	29.8	28.8	27.3
19	27.4	27.1	27.0	27.0	26.5	25.0	25.2	24.7	26.1	28.6	30.8	30.9	32.6	32.7	30.8	30.5	28.3	28.4
20	27.5	27.2	26.5	26.5	26.2	25.5	24.6	24.1	25.0	26.5	...	...	...	...	...	...	...	...
21	27.1	27.1	26.8	26.7	26.5	25.3	24.4	23.5	24.3	26.4	28.3	29.9	30.8	30.8	30.8	30.8	29.9	28.1
22	27.4	26.8	26.4	26.7	26.4	25.0	24.0	24.9	24.9	27.5	30.1	32.7	32.9	33.5	33.6	30.1	29.0	28.6
23	27.2	27.1	27.8	27.7	27.0	26.4	25.3	25.3	25.6	27.5	28.6	29.3	30.9	31.6	30.9	30.9	29.1	28.5
24	27.7	27.6	26.8	26.8	26.6	26.3	26.2	25.3	25.1	27.6	29.1	29.7	30.3	30.0	29.4	28.5	28.4	28.5
25	27.9	27.6	27.6	27.6	27.3	25.3	25.1	25.6	26.8	28.4	29.6	29.9	29.9	30.2	30.0	29.4	28.4	27.6
26	28.0	27.6	27.3	27.2	25.7	25.4	24.6	23.9	26.1	28.0	30.1	31.0	32.3	32.3	31.3	30.1	28.8	28.5
27	27.9	27.7	27.4	27.4	26.6	25.1	23.9	24.0	25.4	28.0	30.0	31.0	31.0	30.9	29.4	28.8	28.5	28.3
28	27.6	26.9	26.1	26.0	35.1	24.6	25.2	25.1	26.6	...	...	...	...	...	...	...	...	...
29	...	...	...	...	...	...	...	...	...	2.66	29.1	32.2	32.3	31.3	29.2	29.2	29.1	28.3
30	28.1	28.1	28.1	28.0	27.5	26.5	25.6	25.5	25.9	27.1	29 0	...	...	...	...	...	...	...
平均 Mean	26.74	26.51	26.34	26.19	25.56	24.57	24.06	24.29	25.40	27.28	28.86	29.88	30.42	30.28	29.50	28.72	27.89	27.31

水平磁力 0.29............+

日 Day.	午前 A.M. 1	2	3	4	5	6	7	8	9	10	11	正午 Noon.	午後 1	2	3	4	5	6
1	821	822	820	822	824	824	814	805	804	801	805	826	828	826	832	823	824	828
2	827	827	829	828	832	835	826	815	810	808	835	844	846	843	844	841	836	839
3	837	828	825	819	820	834	826	812	805	809	816	828	826	828	821	820	801	807
4	804	819	821	822	819	813	799	792	797	800	802	810	812	805	805	814	817	813
5	816	813	817	822	824	828	822	811	810	813	822	828	835	843	845	842	828	815
6	822	823	827	832	831	827	820	816	818	817	821	829	832	837	837	832	822	816
7	828	830	830	833	835	837	827	819	814	...	810	814	817	826	835	838	830	828
8	831	830	827	829	835	841	836	827	822	815	827	833	833	836	833	828	827	828
9	832	833	830	835	836	834	831	828	830	...	...	...	...	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	843	847	854	856	852	850	848	841	837
11	851	850	851	849	847	843	845	852	858	856	862	858	854	842	836	838	840	838
12	838	832	836	838	842	835	827	825	825	830	841	849	852	845	841	838	833	838
13	843	843	842	845	846	844	836	831	832	840	848	857	859	854	853	850	845	845
14	849	854	847	845	847	862	859	852	838	835	845	848	846	839	838	839	837	832
15	837	836	838	838	845	845	845	841	839	831	831	833	836	844	844	839	833	835
16	836	835	838	841	845	847	845	836	834	849	878	854	833	840	853	841	842	840
17	824	825	820	824	842	822	819	808	810	791	781	817	825	804	801	785	741	795
18	805	804	801	799	799	797	794	794	792	...	785	785	805	804	806	805	808	811
19	814	814	812	813	811	806	799	804	792	782	795	813	814	806	817	806	806	810
20	816	819	825	817	820	813	806	800	805	805	806	807	806	806	813	821	817	819
21	819	820	819	821	822	817	812	806	798	786	792	793	811	814	806	806	795	806
22	818	819	819	825	826	827	820	809	800	832	799	802	801	800	815	814	813	806
23	817	807	814	816	815	819	817	817	807	795	807	813	814	807	807	815	818	818
24	824	823	826	825	827	835	836	834	829	820	818	822	829	831	834	834	834	834
25	831	832	829	829	830	835	830	824	821	821	828	838	845	837	837	840	836	836
26	832	835	833	828	828	830	833	831	829	822	823	832	839	841	845	849	850	847
27	838	837	838	839	839	835	827	816	811	808	820	830	839	842	844	835	832	835
28	836	835	838	828	822	822	823	821	819	...	...	...	...	...	...	...	...	...
29	...	...	...	...	...	...	...	...	...	82 7	825	819	826	833	830	829	825	822
30	831	829	829	831	831	829	823	818	822	82 4	833	...	...	...	...	...	...	...
平均 Mean	8277	8276	8279	8283	8300	8299	8249	8194	8168	8177	8215	8273	8303	8291	8304	8281	8234	8251

JUNE 1897.

MAGNETIC DECLINATION.

P. M. 7	8	9	10	11	夜半 M.N.	平均 Mean	最大 Maximum	h m	最小 Minimum	h m	較差 Range	記事 Remarks.
′	′	′	′	′	′	′	′	h m	′	h m	′	
26.5	26.0	26.2	26.5	26.7	26.9	25.94	29.1	11 30 a	22.2	6 40 a	6.9	C
26.6	27.3	26.6	26.2	26.3	26.2	26.02	29.1	1 45 p	22.5	7 00 a	6 6	A at night
26.6	27.2	27.0	26.6	26.6	25.4	26.42	29.6	Noon	22.3	7 00 a	7.3	A afternoon
26.6	26.4	26.1	26.0	26.1	26.0	26.57	31.3	1 25 p	23.3	7 00 a	8.0	A
26.4	26.6	26.4	26.1	26.0	25.2	26.21	30.0	1 20 p	23.1	7 00 a	6.9	C
26.0	26.1	26.3	26.3	26.4	26.4	26.06	29.7	1 00 p	23.4	8 00 a	6.3	C
26.6	26.4	26.4	26.7	26.8	26.1	26.53	30.4	0 30 p	23.0	6 50 a	7.4	C
26 2	26.4	26.1	26.2	26.4	26.2	26.40	29.2	1 30 p	24.6	8 00 a	4.6	C
...	...	...	...	...	...	25.37	...	...	...	...	...	C
26 8	26.7	26.5	26.5	26.5	26.4	27.83	...	...	...	...	...	C
27.6	27.6	27.3	26.9	26.6	26.6	26.54	28.8	2 00 p	23.2	7 00 a	5.6	C
26.6	26.6	27.3	26.9	26.9	26.6	26.96	30.2	Noon	24.4	6 40 a	5.8	C
26.9	26.9	26.8	26.5	26.9	26.5	26.89	30.0	Noon	22.9	6 20 a	7.1	C
26.9	26.9	27.2	27.2	27.3	27.0	26.97	30.6	Noon	**22.0**	6 35 a	8.6	C
27.3	27.3	27.1	27.3	27.7	27.4	27.03	30.6	1 30 p	23.9	7 00 a	6.7	C
28 9	25.5	26.6	28.0	26.9	26.9	27.12	31.9	0 17 p	22.6	7 00 a	9.3	S° afternoon
28.5	26.7	28.9	28.2	27.9	27.9	28.44	**35.4**	4 40 p	22.9	5 00 a	12.5	S
27.9	27.9	27.4	27.6	27.3	27.3	27.57	31.9	2 00 p	23.9	7 48 a	8.0	C
28.1	28.1	28.3	28.0	28.0	27.5	28.23	32.6	2 00 p	24.9	6 17 a	7.7	C
...	27.4	28.0	27.5	27.7	27.4	26.51	...	...	...	...	...	C
28.0	26.7	26.5	27.8	27.8	27.7	27.58	30.8	2 30 p	23.5	8 00 a	7.3	C
28.1	28 4	28.6	27.8	28.1	28.1	28.32	33.5	2 00 p	24.0	7 00 a	9.5	C
28.2	28 1	28.1	28.1	28.4	27.8	28.14	31.6	2 00 p	25.3	7 30 a	6.3	C
28.4	28.5	28.7	28.7	28.4	28.1	27.95	30.8	1 10 p	25.1	9 00 a	5.7	C
28.5	28.4	28.7	28.7	28.7	28.2	28.14	30.5	1 30 p	25.1	7 00 a	5.4	C
29.1	29.2	29.2	29.1	28.0	27.7	28.35	32.5	1 30 p	23.6	7 45 a	8.9	C
28.8	29.2	28.9	28.2	28.3	28.8	28.06	31.1	0 30 p	23.9	7 00 a	7.2	C
...	...	...	...	...	...	25.91	...	...	...	...	...	C
28.9	28.6	28.8	28.6	28.5	28.5	29.28	...	...	...	...	...	C
...	...	...	...	...	...	27.22	...	...	...	...	...	C
27.50	27.30	27.41	27.34	27.30	27.03	27.20	31.09		23.67		7.32	

HORIZONTAL MAGNETIC INTENSITY.

P. M. 7	8	9	10	11	夜半 M.N.	平均 Mean	最大 Maximum	h m	最小 Minimum	h m	較差 Range	記事 Remarks.
825	827	828	826	827	831	8214	834	2 43 p	800	10 25 a	$.0^{3}34$	C
826	825	833	838	834	832	8314	851	2 20 p	805	10 00 a	46	A at night
811	801	801	801	793	801	8154	851	0 25 a	792	11 50 p	59	S°
803	815	802	809	813	817	8093	824	8 00 p	792	8 00 a	32	A
813	817	823	826	828	827	8237	851	2 32 p	808	8 25 a	43	C
816	822	827	823	826	827	8250	837	2 00 p	813	6 30 p	24	C
822	820	810	814	823	828	8247	838	3 00 p	809	9 50 a	29	C
829	824	828	829	829	833	8296	841	5 00 a	815	10 00 a	26	C
...	...	...	...	...	...	8321	...	...	...	...	...	C
837	839	839	846	846	850	8457	...	...	...	...	...	C
835	837	845	843	847	837	8464	862	11 00 a	842	2 00 p	20	C, A late at night
843	845	846	845	843	844	8388	852	0 47 p	823	7 40 a	29	C
845	856	857	861	856	859	8478	859	1 00 p	830	8 20 a	29	C
831	837	834	834	837	838	8426	863	6 20 a	830	5 45 p	33	C
832	833	834	833	833	839	8372	846	7 80 a	829	10 20 a	17	C
829	819	828	814	827	820	8385	**879**	11 07 a	814	10 00 p	65	S° afternoon
788	803	778	784	802	804	8039	842	5 00 a	**732**	4 50 p	110	S
805	805	809	811	818	813	8024	813	6 17 p	784	11 55 a	29	A afternoon
806	806	813	813	812	819	8076	820	0 25 a	782	10 00 a	38	A
814	821	819	826	806	817	8135	830	2 20 a	800	8 00 a	32	C
806	805	806	812	815	817	8085	823	5 10 a	786	10 00 a	37	A
806	813	817	817	817	817	8138	827	6 00 a	780	10 00 a	47	A
816	818	820	821	721	826	8144	827	11 55 p	795	10 00 a	32	C
828	831	831	829	829	830	8289	840	4 17 p	815	10 18 a	25	C
823	831	834	835	831	834	8320	842	1 00 p	821	9 00 a	21	C
833	838	835	838	838	838	8353	853	5 20 p	821	10 40 a	32	C, A afternoon
824	827	830	828	828	834	8307	844	3 00 p	808	90 50 a	36	C
...	...	...	...	...	...	8271	...	...	...	...	...	C
821	826	823	827	828	830	8261	...	...	...	...	...	C
...	...	...	...	...	...	8273	...	...	...	...	...	C
8210	8237	8241	8253	8062	8282	8258	8420		8050		$.0^{3}369$	

明治三十年六月

鉛直磁力 0.34............+

日 Day	午前 A. M. 1	2	3	4	5	6	7	8	9	10	11	正午 Noon	午後 1	2	3	4	5	6
1	373	369	371	377	379	376	369	360	358	353	355	368	374	369	369	368	368	373
2	375	377	377	377	380	382	374	362	357	355	365	377	372	374	372	375	375	377
3	379	379	381	381	385	386	376	363	355	358	360	367	367	378	378	379	374	376
4	385	392	392	391	387	387	376	370	370	374	378	381	383	383	381	383	383	383
5	393	390	394	393	400	390	389	381	375	371	368	375	377	381	381	381	379	377
6	388	388	388	394	394	390	386	376	370	372	372	380	382	390	388	386	384	384
7	393	393	395	395	395	393	381	379	374	...	...	...	368	379	389	390	391	389
8	402	389	387	387	391	396	387	383	385	381	379	383	383	396	398	398	400	400
9	407	402	402	400	402	400	394	391	389	...	...	...	...	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	399	397	406	410	404	404	406	404	404
11	415	413	410	408	399	403	396	394	392	393	401	403	406	399	399	401	406	408
12	422	417	417	422	424	419	410	405	402	410	410	415	412	407	405	405	405	410
13	416	416	416	424	426	416	406	406	406	399	391	391	391	404	409	409	409	409
14	413	413	413	411	418	418	411	400	393	393	393	393	395	398	398	398	400	400
15	400	400	403	405	405	405	403	395	392	387	384	387	384	397	392	392	395	395
16	392	395	403	414	414	414	406	406	408	417	427	419	406	403	411	403	408	406
17	396	409	406	409	414	403	398	389	395	375	373	395	403	400	398	400	392	414
18	423	423	420	417	423	420	417	411	409	403	409	414	423	420	420	420	433	440
19	432	435	432	430	430	424	424	424	421	404	407	413	413	413	424	418	416	421
20	416	419	413	416	416	413	399	383	388	388	394	397	394	399	405	408	408	408
21	402	405	402	400	400	394	391	386	386	383	386	391	408	400	383	386	383	383
22	...	389	389	392	403	400	397	395	389	389	408	413	413	419	424	427	427	424
23	421	416	418	421	424	418	410	408	402	392	394	402	408	405	413	418	418	418
24	409	409	412	409	407	409	415	407	404	395	400	408	411	408	405	403	408	419
25	410	413	413	410	410	413	408	397	395	390	392	400	405	403	400	408	410	413
26	408	411	408	408	408	408	406	403	398	385	385	395	398	403	406	408	411	408
27	406	408	406	406	403	401	398	396	391	391	393	396	406	403	406	403	401	403
28	405	403	408	403	400	398	398	385	388	...	...	...	...	...	...	...	...	...
29	...	...	...	...	...	...	...	...	...	365	370	370	385	390	392	390	392	395
30	390	393	395	400	402	400	393	381	385	380	390	...	...	...	...	...	...	...
平均 Mean	4026	4024	4025	4036	4050	4027	3971	3906	3885	3855	3882	3938	3954	3972	3981	3986	3993	4014

空中電氣

日 Day	午前 A. M. 1	2	3	4	5	6	7	8	9	10	11	正午 Noon	午後 1	2	3	4	5	6
1	26	17	18	18	63	63	53	22	11	3	18	22	−20	20	23	14	22	23
2	25	27	28	38	73	87	64	40	26	0	−49	−23	−40	−41	−2	17	16	18
3	28	28	24	26	25	49	70	41	29	23	7	3	18	−5	3	29	14	13
4	22	29	19	8	45	76	69	55	23	19	24	14	13	11	4	14	11	19
5	28	30	20	27	19	23	—	+	5	12	3	0	3	9	9	14	9	13
6	13*	17*	15*	19*	29*	39*	32*	19*	19*	21*	14*	5*	10*	12*	12*	9*	3*	10*
7	−5*	2*	7*	10*	15*	19*	8*	6*	3*	16*	−6*	−3*	−1*	−2*	13*	19*	27*	33*
8	46	39	32	31	58	58	44	35	27	11	12	9	9	5	7	7	9	±
9	—	±	+	14	41	67	44	35	24	18	15	13	14	12	10	12	9	12
10	34	30	31	35	51	52	41	24	15	10	7	6	8	6	9	6	14	13
11	43	43	60	58	76	93	73	45	26	12	14	9	9	5	6	8	9	12
12	21	23	18	16	17	17	15	5	7	8	12	12	8	11	10	10	15	11
13	16	20	25	31	43	54	41	24	11	9	8	4	4	6	0	8	14	13
14	23	24	21	20	34	28	17	16	9	6	4	10	...	...	...	19	16	17
15	20	26	21	19	21	26	28	19	12	6	4	5	8	7	7	12	12	10
16	−24*	−82*	−27*	−22*	−8*	−60*	−91*	−55*	−39*	−33*	−10*	−37*	10*	10*	14*	12*	11*	13*
17	16	5	13	19	25	45	25	21	14	5	+	—	9	15	15	16	10	10
18	22	26	32	30	56	43	36	19	17	15	13	10	9	7	9	11	11	11
19	16	16	19	26	44	33	22	20	14	9	12	10	7	8	8	10	12	15
20	48	56	28	30	38	47	35	23	15	11	10	5	5	3	0	−3	1	5
21	19	19	19	20	29	35	25	15	15	11	1	−4	−21	−8	−12	−14	−5	−3
22	13	11	9	12	26	25	21	12	7	6	−3	−1	−3	16	12	10	7	7
23	18	14	16	25	34	43	25	16	13	9	8	0	9	11	10	17	23	31
24	—*	0*	16*	17*	36*	35*	33*	27*	13*	12*	12*	8*	5*	12*	7*	−4*	7*	7*
25	−5*	−17*	2*	8*	8*	0*	4*	9*	10*	8*	3*	3*	1*	3*	4*	5*	6*	10*
26	19	19	17	19	27	32	27	22	18	16	13	10	14	9	11	11	15	18
27	27	26	26	31	41	49	35	26	18	10	7	8	5	4	2	5	5	9
28	27	30	30	28	52	75	46	30	15	10	6	5	2	3	4	4	6	7
29	37	38	29	37	60	59	64	47	34	19	12	8	12	7	11	8	14	19
30	22	21	21	22	32	36	26	17	9	10	6	−2	3	0	5	7	9	18
平均 Mean	26.1	25.7	24.0	25.6	41.2	48.6	39.4	26.2	16.6	10.7	6.8	5.5	3.5	5.0	6.7	10.0	11.1	13.4

JUNE 1897.

VERTICAL MAGNETIC INTENSITY.

P. M. 7	8	9	10	11	夜半 M.N.	平均 Mean	最大 Maximum		最小 Minimum		較差 Range	記事 Remarks.
								h m		h m		
366	368	333	364	363	369	3676	379	5 00 a	353	10 00 a	.0³ 26	C
365	367	365	368	368	372	3712	382	6 00 a	355	10 00 a	27	C, A at night
381	376	376	376	374	378	3743	386	6 00 a	355	9 00 a	31	A
380	381	380	378	381	389	3820	392	2 00 a	370	8 00 a	22	C
375	379	379	379	379	381	3820	400	5 00 a	368	11 00 a	32	C
380	386	386	386	384	386	3842	394	4 00 a	370	9 00 a	24	C
376	379	379	383	393	395	3861	394	4 20 a	368	1 00 p	29	C
400	398	400	400	398	400	3925	402	0 00 a	381	10 00 a	21	C
...	...	...	...	...	...	3985	...	...	...	...	...	C
404	404	404	404	406	406	4041	...	...	...	...	...	C
406	406	410	410	413	408	4044	413	11 00 p	392	9 00 a	21	C
407	405	407	405	402	410	4106	424	5 00 a	402	9 00 a	22	C
409	409	406	404	399	406	4074	426	5 00 a	391	10 00 a	35	C
390	390	388	388	393	393	4060	418	5 00 a	390	7 00 p	28	C
392	390	387	390	387	397	3943	411	4 30 a	384	11 00 a	27	C
403	395	400	398	403	403	4064	427	11 00 a	392	1 00 a	35	C, A afternoon
409	409	409	409	411	414	4012	414	5 00 a	373	11 00 a	41	S°
431	431	431	434	437	437	4227	440	6 00 p	403	10 00 a	37	C
416	418	410	416	416	424	4200	435	2 00 a	404	10 00 a	31	C
402	408	408	408	402	408	4042	421	0 00 a	383	8 00 a	38	C
386	...	...	...	...	...	3924	...	...	...	...	...	C
424	422	422	422	419	422	4100	427	4 00 p	389	2 00 a	38	C
410	410	410	410	408	413	4111	424	5 00 a	392	10 00 a	32	C
408	411	408	408	408	413	4081	415	7 00 a	395	10 00 a	20	C
400	410	408	410	408	413	4058	416	6 15 a	390	10 00 a	26	C
398	408	403	400	406	408	4033	413	2 12 a	385	10 00 a	28	C
398	401	401	403	398	406	4010	408	2 00 a	391	9 00 a	17	C
...	...	...	...	...	...	3987	...	...	...	...	...	C
392	395	392	395	395	395	3875	...	...	...	...	...	C
...	...	...	...	...	...	3917	...	...	...	...	...	C
3966	3983	3974	3980	3981	4018	3975	4110		3823		.0³ 287	

ATMOSPHERIC ELECRTICITY.

P. M. 7	8	9	10	11	夜半 M.N.	平均 Mean	最大 Maximum		最小 Minimum		較差 Range	記事 Remarks.
								h m		h m		
7	12	10	17	21	23	21.1	100	5 22 a	-42	0 55 p	142	—
22	21	21	22	25	32	18.6	95	5 25 a	-157	0 22 p	252	—
20	33	47	26	25	18	24.7	77	7 05 a	-12	3 18 p	89	●°0.10p-3.35p ●°7.25p-
27	27	25	22	9	4	24.9	82	6 20 a	-5	11 23 p	87	-●°-2.20a
16	27	26	25	26	22	16.6	87	6 32 a	-76	6 55 a	163	●°6.20a-8.55a ●°10.30a
+	+	+	—	—	—	...	157	7 00 p	-128	11 28 p	285	-●°-2.22a ●°5.45a-9.15a ●°3.15p-
35*	33*	28*	32*	36*	40*	...	40	11 33 p	-35	0 00 a	75	-●°-2.50p
26	47	55	46	25	11	28.2	202	6 12 p	-103	5 40 p	305	●°4·45p-●11.40p-
22	33	33	33	33	30	25.0	76	5 55 a	-32	0 45 a	108	-●-3.45a
20	24	36	42	42	49	25.2	54	4 37 a	4	1 30 p	50	●°4.20p
11	13	13	14	15	19	28.6	102	5 50 a	5	2 00 p	97	●4.47p-4.50p
16	8	18	17	12	10	13.2	29	1 50 a	-3	7 50 p	32	●°9.30a-10.52a ●°2.50p-M.N.
16	12	12	10	11	12	16.8	58	5 37 a	-6	2 53 p	64	●°1.30p-4.30p ●°9-55-11.25p
14	17	18	16	22	24	17.8	34	5 00 a	3	10 48 a	31	●°5.55a-9.30a
12	11	11	14	12	4	13.6	37	1 38 a	1	10 15 a	36	●°7.05p-
19*	23*	28*	25*	18*	21*	...	60	11 50 a	-163	1 42 a	223	●^{2} 0.55a-●°10.30a-1.55p
11	9	10	14	21	20	15.8	50	10 45 a	-134	11 50 a	184	●°-2.45a ●°.950a-1.30p
15	13	15	16	16	16	19.5	63	5 08 a	7	1 23 p	56	≡°4.20a-6.10a
16	28	29	28	30	37	19.5	63	5 25 a	7	1 45 p	56	—
18	18	18	18	18	19	19.4	73	2 18 a	-7	4 20 p	80	—
5	16	33	30	14	12	10.5	42	5 40 a	-29	5 42 p	71	⟨ N.W.7.50p-ꓘ°NW-⟨ NE-10.30p
15	6	26	12	12	13	11.3	45	8 40 p	-4	11 15 a	49	●°8.30p-9.25p
25	27	+	+	±	±	18.7	>335	11 10 p	<-272	11 35 p	>607	●°8.45p-●11·10p-
23*	±	--	18*	18*	17*	...	...	...	<-294	0 55 a	...	-●-●°0.50a-2.20a ●°2.10p-●7.20p-
20*	35*	20*	20*	17*	18*	...	45	8 40 p	-47	6 20 a	97	-●°-9.07p
21	24	27	28	30	30	19.9	36	5 40 a	9	2 00 p	27	●°11.45a-2.30p
11	14	24	21	28	24	19.0	54	6 10 a	2	3 00 p	52	—
10	14	18	20	19	26	20.3	82	5 50 a	0	1 45 p	82	—
19	12	24	25	27	27	27.0	76	7 32 a	7	1 42 p	69	—
32	3	16	9	—	--	14.6	40	5 50 a	<-105	11 30 p	>145	●°7.50a-10.35a ●°1.30p-●10.30p-
17.1	18.8	23.5	21.9	21.4	21.0	19.6						

明治三十年七月

偏角 4°W+

日 Day	午前 A.M. 1	2	3	4	5	6	7	8	9	10	11	正午 Noon	午後 1	2	3	4	5	6
1	...	...	...	...	...	...	...	...	...	27.0	30.4	31.2	31.1	31.1	30.2	29.0	28.4	28.3
2	27.5	27.5	27.5	27.3	27.1	26.5	25.8	26.2	27.0	28.0	29.2	30.1	30.7	31.1	30.2	28.9	28.6	28.6
3	27.5	27.4	27.4	27.5	26.5	25.6	25.2	25.3	26.1	28.0	28.9	30.2	31.4	31.1	30.4	29.5	28.9	28,6
4	28.1	27.6	27.5	27.4	26.6	26.3	25.9	26.9	27.9	27.5	27.5	27.6	29.6	31.1	31.2	30.5	29.9	28.5
5	28.1	27.9	27.6	27.6	27.5	26.3	25.4	25.7	26.5	27.9	29.7	31.2	32.2	32.4	32.1	31.2	30.6	29.7
6	29.5	29.2	28.6	28.9	28.6	28.0	27.6	27.2	27.2	27.9	29.1	31.2	31.9	33.4	34.0	32.8	31.4	31.3
7	29.2	29.1	28.5	28.5	28.2	27.6	26.1	25.7	25.4	...	28.8	31.0	31.3	31.9	32.8	...	...	...
8	...	...	...	...	...	...	...	...	...	31.0	31.7	32.5	32.8	31.9	31.7	31.3	30.4	29.8
9	29.8	29.2	29.2	28.8	28.0	26.7	26.4	26.6	27.0	28.6	31.0	31.3	31.9	32.0	31.3	31.3	31.3	30.7
10	29.7	29.4	28.9	28.8	28.3	27.5	27.5	27.6	28.3	29.4	31.2	31.9	32.5	32.0	31.6	31.3	29.8	30.0
11	29.4	29.2	28.9	28.8	27.3	26.3	27.2	29.2	31.2	...	...	31.3	31.3	30.6	30.6	30.9	...	...
12	...	30.9	30.4	30.0	28.5	28.3	28.0	26.7	28.6	29.8	31.3	32.2	32.2	31.3	30.4	30.0	29.7	30.0
13	29.8	29.4	29.4	29.4	28.0	26.4	25.7	27.3	29.2	31.3	32.8	33.4	32.8	32.0	31.3	31.3	30.1	29.2
14	29.7	29.7	29,8	29.7	27.3	27.0	26.9	28.2	29.8	31.0	32.2	32.5	32.0	30.6	30.1	29.7	29.4	29.2
15	30.0	28.3	28.3	27.9	28.0	27.6	27.9	27.9	28.3	30.4	32.0	34.0	33.9	33.9	32.9	31.3	31.3	29.8
16	29.1	28.9	29.1	28.5	28.3	27.7	26.3	26.9	27.6	29.7	31.9	33.7	34.0	33.9	32.5	31.3	30.1	29.7
17	29.5	29.5	29.4	29.1	28.9	27.6	26.7	26.7	28.5	29.7	31.3	32.0	33.1	33.9	33.4	32.0	30.3	30.0
18	29.5	28.9	29.2	29.2	28.8	27.3	26.9	27.5	27.9	30.1	31.9	33.4	33.4	32.8	32.0	31.3	30.0	29.5
19	29.1	28.8	28.6	28.8	28.9	28.2	26.1	25.4	25.4	25.8	29.1	31.9	32.8	33.7	32.9	31.3	29.4	29.1
20	29.1	28.8	28.0	28,0	27.0	26.6	25.8	25.7	26.4	29.4	31.3	32.9	33.1	32.6	31.9	30.7	29.7	29.5
21	29.4	29.2	29.2	29.1	28.3	27.5	25.8	25.1	25.8	28.2	30.7	32.2	33.1	32.9	32.0	30.4	29.2	29.4
22	30.4	29.6	29.3	28.7	27.8	26.7	28.1	27.7	29.5	23.3	34.5	35.8	36.2	35.2	34.0	32.0	31.1	30.5
23	29.9	29.2	26.2	29.0	27.8	26.4	26.4	27.4	29.8	29.9	31.4	32.4	33.0	32.9	32.9	31.4	31.3	29.9
24	30.1	29.8	29.0	29.5	29.3	28.0	28.0	28.4	29.6	31.4	32.9	33.0	33.2	33.0	32.9	31.5	30.7	30.5
25	29.0	28.7	28.7	28.4	28.4	28.1	28.0	27.7	29.3	29.9	31.4	32.6	33.0	32.3	31.5	30.7	30.4	29.9
26	29.8	29.3	29.3	29.3	29.2	28.6	28.3	28.4	29.0	30.4	31.4	32.6	34.0	33.6	32.7	31.4	30.1	29.8
27	29.8	29.3	29.3	29.5	29.2	27.6	27.0	27.0	28.7	31.3	32.3	33.2	33.5	33.3	32.1	31.4	30.2	29.6
28	29.3	29.5	29.3	29.2	29.3	27.8	27.6	27.7	28.4	30.7	31.7	32.4	32.3	33.2	32.3	31.4	29.9	29.6
29	29.3	29.3	29.3	29.2	28.7	27.6	27.6	28.6	29.5	31.3	31.3	31.7	32.3	31.5	30.8	32.1	30.4	30.5
30	29.8	29.5	29.6	29.2	29.0	27.4	27.1	27.7	28.6	31.0	32.1	33.6	33.8	32.9	31.4	29.6	30.1	30.5
31	28.7	27.8	28.7	28.9	35.4	26.4	26.2	27.8	28.7	30.1	31.4	34.8	35.4	36.7	36.2	36.2	35.5	33.8
平均 Mean	29.29	29.00	28.87	28.77	28.08	27.23	26.81	27.12	28.11	29.66	31.08	32.25	32.70	32.61	32.01	31.12	30.28	29.84

水平磁力 0.29………..+

日 Day	午前 A.M. 1	2	3	4	5	6	7	8	9	10	11	正午 Noon	午後 1	2	3	4	5	6
1	...	...	...	...	...	...	...	...	...	831	837	850	857	858	857	847	843	841
2	838	837	837	837	838	838	832	835	831	840	848	848	850	855	857	857	852	846
3	846	845	844	843	850	845	843	840	843	847	850	854	856	857	850	849	839	835
4	842	846	843	841	845	846	837	828	828	825	837	837	830	839	843	838	834	826
5	827	835	834	836	838	837	832	831	829	833	834	830	823	823	822	823	818	823
6	837	833	834	838	838	840	832	822	818	811	823	835	840	845	843	840	837	833
7	848	844	843	842	843	841	841	834	834	...	833	833	844	842	...	...	...	...
8	...	...	...	...	...	...	...	...	...	820	827	835	835	842	840	835	823	829
9	828	828	830	834	835	835	830	826	828	834	847	842	840	837	837	837	837	835
10	838	838	838	840	845	843	840	830	824	831	844	850	845	843	846	842	836	836
11	841	846	845	846	851	845	842	845	851	848	869	872	865	862	865	852	840	827
12	834	832	833	833	835	834	826	825	818	828	843	851	852	844	834	837	836	835
13	846	843	842	842	842	833	825	825	825	825	840	841	840	840	843	844	842	840
14	841	841	841	841	841	835	831	839	850	853	855	855	855	856	855	847	841	853
15	836	841	829	828	827	833	833	827	827	827	819	819	828	842	841	840	835	835
16	834	834	841	834	828	834	829	822	813	808	811	829	831	833	834	837	835	833
17	837	835	836	837	837	830	821	814	809	812	821	825	838	850	847	835	832	829
18	831	831	831	831	832	831	825	822	819	842	848	847	846	847	846	843	833	831
19	849	839	839	840	833	839	832	824	813	813	824	839	851	850	851	853	846	840
20	848	850	852	852	852	848	840	833	824	832	840	852	845	841	841	841	833	833
21	840	839	835	834	834	834	830	820	813	821	828	833	835	835	826	831	834	833
22	849	850	847	856	856	857	840	843	816	810	814	815	806	801	797	808	811	810
23	817	816	816	816	824	832	837	834	816	823	815	805	814	824	831	817	819	817
24	832	833	835	831	824	824	816	805	790	799	811	813	823	824	811	816	819	820
25	829	836	836	839	839	835	829	830	819	815	822	834	828	824	825	835	832	827
26	835	832	832	832	831	829	827	818	804	808	823	832	837	840	841	839	832	828
27	836	841	841	841	841	835	828	821	809	813	822	826	837	841	843	842	841	839
28	840	832	832	830	830	824	818	815	808	806	811	824	834	835	832	827	826	828
29	837	835	835	835	836	831	825	824	816	826	836	843	844	814	844	844	839	838
30	840	840	837	836	837	832	824	820	826	845	856	858	851	850	851	845	844	852
31	839	845	833	841	841	838	834	837	838	846	841	813	819	807	777	748	727	851
平均 Mean	8378	8378	8369	8374	8382	8365	8313	8272	8220	8257	8332	8368	8387	8397	8377	8350	7305	8301

JULY 1897.

MAGNETIC DECLINATION.

P. M. 7	8	9	10	11	夜半 M.N.	平均 Mean	最大 Maximum		最小 Minimum		較差 Range	記事 Remarks.
′	′	′	′	′	′	′	′	h m	′	h m	′	
28.4	28.3	28.1	28.1	28.0	28.0	29.04	...	...	...	...	..	C
28.4	28.3	28.4	28.3	28.3	28.3	28.24	31.1	2 00 p	25.5	7 06 a	5.6	C
28.6	28.9	28.7	28.4	27.8	28.3	28.17	31.7	1 18 p	25.2	7 00 a	6.5	A
29.0	29.0	28.5	28.5	28.5	27.9	28.29	31.2	3 00 p	25.8	6 48 a	5.4	C
29.7	29.7	29.9	29.7	29.7	29.1	29.06	32.5	1 48 p	25.4	7 00 a	7.1	C
31.3	30.6	30.4	29.2	29.4	29.2	29.91	34.0	3 00 p	27.0	8 15 a	7.0	C
...	...	...	...	...	...	28.86	...	...	...	...	...	C
30.6	30.6	30.3	30.3	30.0	29.7	30.97	...	...	...	...	...	C
30.6	31.3	30.6	30.4	30.4	29.7	29.75	32 2	1 24 p	26.1	7 12 a	6.1	C
30.1	29.8	29.7	29.7	29.7	29.5	29.76	32.6	0 55 p	27.0	7 22 a	5.6	C
...	...	...	...	...	...	29.44	...	...	...	...	...	C
30.4	30.4	30.3	30.1	20.3	29.8	29.98	32.2	Noon	26.7	8 00 a	5.5	C
30.4	31.3	30.9	30.6	30.1	30.1	30.09	33.4	Noon	25.7	7 00 a	7.7	C
30.1	29.2	29.7	30.1	29.5	29.1	29.69	32.5	Noon	26.9	7 00 a	5.6	A
29.4	30.6	30.4	30.6	29.5	29.5	30.15	34.4	0 20 p	27.0	5 38 a	7.4	A
29.2	29.8	29.8	29.8	29.8	29.7	29.89	34.0	1 00 p	26.3	7 00 a	7.7	C
29.8	29.8	29.8	29.7	30.0	29.8	30.03	34.1	2 18 p	26.7	7 00 a	7.4	C
29.7	29.5	29.4	29.2	29.5	29.2	29.84	33.5	0 50 p	26 7	6 30 a	6.8	C
29.7	29.5	29.5	29.1	28.8	29.2	29.21	33.9	2 10 p	**24.8**	9 12 a	9.1	C
29.5	29.4	29.5	29.4	29.5	29.2	29.29	33.1	1 00 p	25.7	8 00 a	7.4	C
29.8	29.7	29.8	29.7	30.3	30.3	29.86	33.1	1 00 p	24.9	8 30 a	8.2	C
30.5	30.5	30.5	30.2	30.1	30.2	30.93	36.9	1 24 p	26.1	6 18 a	10.8	A
30.1	31.1	31.1	30.7	30.5	30.2	30.16	33.2	1 24 p	25.8	6 16 a	7.4	A
30.2	29.8	29.9	29.8	29.8	29.2	30.40	33.3	0 38 p	27.8	6 42 a	5.5	C
29.9	30.7	30.2	30.2	29.9	29.8	29.95	33.3	0 40 p	27.6	7 36 a	5.7	C
29.8	30.1	30.1	39.9	29.9	29.8	30.28	34.1	1 15 p	27.7	7 32 a	6.4	C
29.8	30.5	31.4	31.0	30.2	29.9	30.30	33.5	1 00 p	26.5	7 26 a	7.0	C
30.1	30.4	30.4	29.9	29.8	29.5	30.07	33.2	2 00 p	47.4	7 30 a	5.8	C
30.7	30.4	30.2	30.2	30.1	29.9	30.10	32.4	1 34 p	27.4	6 30 a	5.0	C
31.4	31.4	31.5	30.8	29.0	29.9	30.29	33.8	1 00 p	27.0	6 20 a	6.8	A
32.9	32.9	30.8	32.1	31.8	31.8	31.29	**37.1**	2 10 p	26.1	7 10 a	10.9	S
30.00	30.12	29.99	29.85	29.66	29.51	29.76	33.34		26.40		6.94	

HORIZONTAL MAGNETIC INTENSITY.

P. M. 7	8	9	10	11	夜半 M.N.	平均 Mean	最大 Maximum		最小 Minimum		較差 Range	記事 Remarks.
								h m		h m		
837	840	841	842	838	838	8438	...	...	...	...	...	C
845	848	850	850	843	847	8441	858	2 20 p	831	8 50 a	0³ 27	C
835	831	834	836	838	839	8437	861	1 08 p	831	8 00 p	30	A
823	825	830	831	833	837	8352	851	5 30 a	822	7 12 p	29	A
824	827	830	832	822	836	8291	839	5 20 a	818	5 00 p	18	A
832	834	835	843	842	847	8347	850	9 42 p	811	10 00 a	39	C morning, A afternoon
...	...	...	...	...	...	8402	...	...	...	...	...	C
827	833	829	827	829	829	8307	...	...	...	...	...	A
835	834	827	840	838	838	8351	848	11 08 a	825	8 15 a	23	A
837	847	847	845	847	843	8406	850	11 54 a	822	8 50 a	28	A
824	828	827	823	826	832	8447	**874**	11 30 a	822	10 05 p	52	A morning, C afternoon
834	838	839	843	843	843	8362	852	1 00 p	818	8 20 a	34	C
831	834	833	835	838	839	8370	846	1 00 a	825	7 20 a	21	C
853	870	864	848	848	849	8484	873	8 07 p	831	7 00 a	42	C, S° at night.
836	836	843	835	835	841	8330	850	0 00 a	819	11 00 a	31	A
834	834	839	840	838	837	8309	842	0 00 a	808	10 27 a	34	A
829	829	829	830	829	829	8300	851	2 14 p	808	8 50 a	43	A
831	831	837	839	838	839	7355	848	11 00 a	816	8 50 a	32	C
841	845	848	850	853	845	8401	853	4 00 p	812	9 28 a	41	C
833	833	833	834	834	839	8401	854	3 16 a	821	8 40 a	33	C
834	834	840	845	846	844	8332	846	11 00 p	813	9 00 a	33	C
806	810	810	809	816	815	8230	860	5 57 a	793	1 42 p	67	A
323	822	824	825	829	828	8218	837	7 00 a	803	11 40 a	33	A
826	828	832	831	831	831	8210	835	3 00 a	790	9 00 a	45	A
825	826	831	828	831	834	8295	840	4 33 a	813	9 28 a	27	A
831	830	831	833	832	835	8297	846	2 28 p	803	9 13 a	43	C
833	822	822	824	828	830	8315	846	3 10 p	809	9 28 a	37	A
829	830	829	832	832	836	8267	840	0 58 a	806	10 00 a	34	A
938	844	844	844	838	838	8366	845	0 30 p	815	8 52 a	30	C
853	850	840	837	837	830	8413	858	Noon	820	7 40 a	38	A
778	780	784	774	782	790	8068	849	2 10 a	**727**	5 00 p	122	S
8300	8321	8337	8335	8338	8353	8339	8500		8119		0³ 381	

明治三十年七月

鉛直磁力　　0.34…………+

日 Day	午前 A.M. 1	2	3	4	5	6	7	8	9	10	11	正午 Noon	午後 P.M. 1	2	3	4	5	6
1	...	...	...	...	...	...	...	...	...	383	390	395	385	399	402	399	397	399
2	395	397	395	395	395	395	392	388	383	378	390	402	399	399	397	392	399	392
3	387	387	387	389	391	387	382	380	380	370	363	368	375	368	375	377	377	377
4	377	377	377	377	377	377	365	370	370	356	363	356	356	356	363	370	368	363
5	359	359	359	359	364	359	354	352	350	350	357	343	352	345	350	350	348	350
6	348	348	346	348	348	348	346	339	332	328	326	326	328	328	332	332	335	339
7	338	332	338	334	332	334	334	327	332	...	...	...	...	...	...	...	...	...
8	...	...	...	...	...	...	...	...	...	324	333	337	339	346	350	348	345	350
9	353	354	355	360	358	357	349	314	345	340	352	352	357	358	358	355	358	357
10	357	358	358	359	359	357	350	348	348	345	342	343	348	349	352	350	348	352
11	350	351	353	354	356	350	342	340	347	346	355	351	351	350	354	350	345	341
12	353	353	352	350	352	350	350	347	340	342	346	350	350	346	349	349	344	343
13	351	352	351	352	351	346	341	334	340	341	349	347	345	344	344	347	350	350
14	355	356	356	360	359	353	346	349	346	361	369	370	370	371	370	362	361	365
15	361	364	364	368	365	362	361	357	361	360	353	355	361	374	374	373	372	373
16	373	374	376	373	373	379	368	363	356	353	353	361	364	365	366	370	370	371
17	374	374	376	376	377	375	367	366	353	341	337	343	349	352	360	366	354	360
18	369	369	368	370	372	568	361	353	348	354	355	355	361	365	367	365	366	367
19	374	373	371	371	373	373	369	366	346	341	348	353	355	358	368	369	367	365
20	369	369	366	369	369	368	360	351	335	335	343	347	344	349	353	358	355	360
21	364	365	363	363	363	364	356	346	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	330	334	335	341	343	332	333	339	341	340
23	341	340	342	342	343	343	338	335	332	330	330	325	330	332	335	329	330	325
24	338	336	339	338	335	334	333	325	313	320	327	328	331	328	322	323	325	326
25	327	327	329	330	329	320	326	326	329	327	327	327	322	324	327	328	327	328
26	329	328	329	331	331	333	330	324	312	321	327	330	328	327	324	323	321	322
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	327
28	334	333	333	334	334	331	327	319	303	307	311	316	316	318	319	319	319	321
29	330	330	330	331	331	328	326	321	312	318	326	325	328	330	332	330	331	332
30	334	334	334	337	338	337	330	325	319	322	322	322	327	331	330	330	330	336
31	333	333	337	339	337	336	335	331	325	329	324	316	321	327	320	316	319	331
平均 Mean	3546	3546	3549	3559	3564	3546	3496	3454	3403	3413	3447	3459	3177	3490	3509	3506	3501	3504

空中電氣

日 Day	午前 A.M. 1	2	3	4	5	6	7	8	9	10	11	正午 Noon	午後 P.M. 1	2	3	4	5	6
1	—	—	—	—	—	—	—	—	14	11	8	7	4	4	5	3	8	10
2	11	12	8	7	8	15	4*	2*	8*	11	12	11	11	7	8	8	4	21*
3	11	8	13	23	22	25	27	22	5	9	4	9	4	3	3	2	2	3
4	14	10	12	12	14	16	12	13	9	2	2	2	2	4	6	4	8	10
5	3	8	8	11	16	19	14	12	4	6	8	6	9	6	5	5	7	10
6	24	27	29	26	43	33	25	18	15	13	11	7	10	2	2	6	3	8
7	14	12	15	19	29	44	32	37	28	24	11	13	16	3	7	3*	-3*	11
8	16	23	26	29	38	30	23	21	12	3*	-5*	0*	1*	5	6	10	7	13
9	4	4	2	5	13	19	25	21	8	7	5	7	7	4	4	6	10	6
10	17	17	12	14	19	22	17	9	7	3	6	8	3	3	10	6	8	10
11	11	11	12	12	14	19	13	11	6	5	4	-2	2	2	1	-1	-2	0
12	17	17	17	16	17	18	20	17	15	9	4	0	0	3	±	±	±	±
13	9	3	6	5	9	5	-5*	5	6	4	±	+	-2*	0*	2	5	8	6
14	13	-5*	-8*	0*	2	6	10	10	4	-3	2	2	5	2	5	8	11	—
15	-2	-3	2	2	12	14	10	5	4	4	-2	-3	2	1	2	2	4	9
16	10	8	9	8	11	15	12	10	6	1	5	3	3	4	4	5	7	8
17	10	10	9	5	9	7	7	7	5	4	8	3	0	3	5	9	10	12
18	7	-7*	±	±	—	±	-13*	25	6	7	0	0	1	2	-5	-5	-2	0
19	6	7	4	4	4	3	4	3	-4	3	5	6	4	1	1	0	0	2
20	10	10	11	11	15	16	14	3	11	3	5	0	0	0	3	3	4	4
21	6	4	2	2	2	4	4	6	7	6	2	3	3	1	-1	2	4	5
22	3	2	3	4	5	8	8	11	5	3	4	3	3	4	3	5	7	8
23	8	9	11	15	3	12	9	6	4	3	5	7	2	6	8	7	12	13
34	8	7	6	8	16	26	29	18	11	9	11	10	5	8	9	14	16	16
25	7	7	9	7	13	29	14	16	16	9	9	8	5	5	5	4	5	7
26	10	7	7	15	33	61	37	27	14	12	9	10	10	4	3	4	5	8
27	13	10	8	8	36	46	22	12	8	7	3	4	8	7	4	8	5	8
28	14	10	10	10	20	31	24	14	9	5	4	4	7	5	7	10	16	21
29	19	16	17	14	19	22	25	20	4	-1	-1	-1	6	4	4	1	—	+
30	5	3	5	4	9	15	9	10	5	5	9	...	...	...	...	...	...	...
31	...	...	...	...	...	...	...	...	...	...	...	12	6	5	7	7	6	2
平均 Mean	10.3	9.6	10.1	14.7	16.1	21.0	17.2	13.9	8.4	6.2	5.5	5.0	4.9	3.7	4.2	4.9	6.4	8.1

JULY 1897.

VERTICAL MAGNETIC INTENSITY.

P. M. 7	8	9	10	11	夜半 M.N.	平均 Mean	最大 Maximum	h m	最小 Minimum	h m	較差 Range	記事 Remarks.
395	397	397	395	395	399	3950	...	...	...	...	...	C
390	390	385	388	385	390	3921	402	noon	378	10 00 a	24	C
370	375	373	373	355	373	3775	391	5 00 a	363	11 00 a	28	C
359	359	359	356	354	361	3652	379	5 24 a	354	11 00 p	25	C
350	350	348	348	348	350	3522	364	5 00 a	343	noon	21	C
337	341	341	341	339	346	3384	350	6 20 a	324	10 52 a	26	C
...	...	...	...	...	...	3334	...	...	...	...	...	C
348	343	346	349	349	353	3440	...	...	...	...	...	C
349	349	350	352	351	354	3528	360	4 00 a	340	10 00 a	20	C
345	351	348	348	352	352	3508	359	5 00 p	342	11 00 a	17	C
340	347	341	340	347	349	3479	356	5 00 a	340	8 00 a	16	A
341	347	348	346	346	350	3477	353	2 00 a	340	9 00 a	13	C
344	349	346	348	345	352	3466	352	4 00 a	334	8 00 a	18	C
364	369	367	357	361	364	3609	371	2 00 p	346	9 00 a	25	C morning, S° night
372	373	376	374	373	377	3667	377	M.N.	353	11 00 a	24	A
373	376	377	376	376	376	3692	379	6 00 a	352	11 10 a	27	A
363	367	368	370	368	367	3626	397	5 00 a	337	11 00 a	40	A
370	372	375	374	373	374	3655	375	9 00 p	348	9 00 a	27	A
367	369	369	369	369	367	3645	375	0 00 a	341	10 00 a	34	C
361	362	364	365	364	365	3575	370	3 16 a	334	8 54 a	36	C
...	...	...	...	...	...	3605	...	...	...	...	...	C
342	341	343	340	340	340	3384	...	...	...	...	...	A
332	332	335	335	335	336	3345	343	5 00 a	324	11 45 a	19	C
328	328	331	330	329	329	3290	339	3 00 a	313	9 00 a	26	C
327	329	328	327	329	328	3274	330	4 00 a	322	1 00 p	8	C
322	325	...	...	...	...	3263	...	...	...	...	...	—
323	327	328	328	334	334	3287	...	...	...	...	...	—
326	328	327	330	330	330	3235	334	4 00 a	301	8 50 a	33	C
333	335	334	334	334	334	3290	335	8 00 p	308	9 08 a	27	C
337	337	333	334	334	334	3311	338	5 00 a	319	9 00 a	19	A
345	347	347	341	345	347	3325	348	8 30 p	313	0 10 p	35	S
3501	3522	3530	3524	3529	3547	3502	3607		3362		245	

ATMOSPHERIC ELECTRICITY.

P. M. 7	8	9	10	11	夜半 M.N.	平均 Mean	最大 Maximum	h m	最小 Minimum	h m	較差 Range	記事 Remarks.
6	9	11	13	12	12	8.6	15	8 45 a	<-111	0 a-5 a	>126	-●-●°9a-7.10p,9.50p-10.10p,11.00p
—	55*	19	12	7	11	10.1	69	8 16 p	-39	7 00 p	108	●°4.10a-10.45a ●°5.50p-10.50p
5	7	12	7	12	10	10.3	34	7 18 a	00	10 45 a	34	—
11	9	9	7	16	±	8.9	22	7 22 a	-32	11 40 p	54	≡°3.40a-7a●°11.05a-11.10a<7p-8p
11	15	23	26	19	21	10.9	31	10 18 p	-7	0 42 a	38	≡°4a-4.20a
10	15	14	15	10	12	15.7	45	5 14 a	0	5 24 p	45	—
17	14	28	31	33	1*	20.9	51	7 20 a	-39	4 54 p	90	●°4 40a-●3p-●°6.13p-9.50p●10.55p-
9	5	1*	8	7	12	16.3	44	5 50 a	-19	11 15 a	63	-●-0.40a●°7.50a-8 50a●°9 28a-1.10p●°8.15p-
16	18	13	12	13	14	10.1	27	7 28 a	-6	1 14 a	33	-●°-6.40a
10	12	14	13	7	9	11.1	24	6 00 a	2	9 23 a	22	●°5.55p-8.20p
5	7	9	13	19	19	7.9	22	11 48 p	-2	4 40 p	24	⛈°11.30p- [p-8.50p
±	±	-2*	9	9	9	11.6	>153	7 20 a	<-110	3 30 p	>263	-⛈°-0.35a <°1a.-2a ⊤ 2p-⛈2 46p-⊤-6.25p●°2.54
9	8	9	11	9	-20*	6.6	50	10 28 a	-59	10 46 a	109	●0.5 a-2.25p●°11.30p-● m.n. [505p-850°
±	±	-1	-6	-2	0	6.8	>159	7 45 p	<-116	6 30 p	>275	-●-●°-7.45a.,●6.18p-●²-●-●°-9.35p ⊤ ⊤°⛈⛈²<
8	8	9	7	8	8	4.6	16	5 10 a	-3	noon	19	●°0.50a-1.50a,8.30a-8°.45a,1p-1.15p, 8.40-9.20p, [11.50p
10	12	11	9	12	11	8.1	15	5 42 a	0	noon	15	-●°-1.30a,6.30a-10.20a1.35p-2.20p,4.30p-9.20p-
10	10	10	10	9	5	7.4	13	6 00 p	-2	1 28 p	15	●°6 30p-9.40p [⚡3.a
0	1	2	3	4	4	2.8	79	3 26 a	-95	5 20 a	174	●° 0.50a-●²1,30a-●2.50a-●²3.50a●°8.15a-8.50a.
3	9	10	11	13	11	4.6	13	11 00 p	-7	9 05 a	20	●° 6.45a-10.40a [Noon
6	7	6	6	6	6	6.7	17	9 10 p	0	2 20 p	17	●°-7.45a-● ²7.55a-●° 8.05a-8.20a ●° 1p-5.10p,⚡
5	4	5	5	7	5	3.9	13	8 36 a	-1	2 55 p	14	●°4a-4.15a●°8p-8.20p
8	8	7	6	8	7	5 5	14	8 00 a	0	1 28 a	14	●°2a-3.20a≡°4.10a-6.30a
13	12	12	12	13	11	8.9	19	4 22 a	-5	4 40 a	24	≡°2.10a-4.30a
12	11	13	9	8	12	12.2	32	6 50 a	-4	0 56 p	36	— [8.40p
11	12	11	10	10	10	10.0	36	5 53 a	-4	1 12 p	32	≡ 5.05a-≡²-≡-≡²-≡-≡²-≡-≡°-8.15a < 7.10p-
11	12	12	13	9	11	14.3	66	5 56 a	1	3 42 p	65	≡4.05a-≡²-≡-≡²-≡°-10a
16	20	18	14	13	13	13.0	55	6 10 a	-3	5 33 p	58	≡3.50a-≡²-≡⁶-8a<7.30p-9.30p
22	24	23	22	24	24	15.0	32	5 50 a	3	11 50 a	29	≡°5a-6.30a <8p-10p
+	-2*	9	14	6	4	10.0	58	6 42 p	<-97	4 44 a	>155	●°4.30p-●●2-5p●°10.40p-
...	...	...	...	...	...	7.2	...	...	...	...	...	-●°0.30a-●°4.25p-5.30p ●° M.N.-
3	7	1	1	0	9	5.1	...	...	...	...	...	-●°-2.35a-●°4.40a-7.40a●°5.50p-6.45p.,10.55p
9.5	10.6	11.4	10.8	10.7	10.4	9.5						

明治三十年八月

偏角 4°W+

日	午前 A.M.											正午	午後					
Day.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2	3	4	5	6
1	30.4	30.3	29.7	28.9	28.3	28.2	27.7	27.6	28.9	...	32.6	...	32.2	32.0	31.7	30.4	29.1	28.6
2	28.9	28.6	27.9	27.7	27.0	26.3	26.3	26.6	28.5	30.4	32.3	33.2	34.5	33.4	32.3	30.4	30.4	28.9
3	28.6	28.3	27.8	27.5	27.5	27.2	27.7	26.7	26.4	27.1	29.8	32.9	33.5	33.1	32.1	31.2	29.8	28.7
4	28.7	28.3	28.6	28.3	28.1	27.5	27.2	27.7	...	...	...	...	...	...	...	...	...	...
5	...	29.3	28.7	29.2	29.0	28.3	27.7	27.4	27.5	38.6	30.5	32.0	32.0	32.3	32.0	30.5	29.8	29.3
6	29.0	28.7	28.6	28.6	28.7	28.0	27.5	...	27.2	28.0	29.8	30.9	32.3	33.5	33.3	32.0	30.5	29.5
7	29.1	29.1	28.8	28.7	28.7	27.9	26.5	25.6	26.2	27.8	28.7	30.6	32.1	32.2	31.9	30.6	29.9	29.4
8	28.8	28.5	28.5	28.5	27.8	27.6	26.6	26.8	27.2	28.7	30.3	30.6	32.1	32.4	32.1	31.3	30.6	...
9	29.7	29.1	28.7	28.8	27.9	27.5	26.9	26.3	27.6	28.8	29.6	...	...	...	...	29.4	...	...
10	28.2	29.9	27.3	26.9	27.3	27.5	28.8	27.9	29.0	29.4	30.6	31.9	32.1	32.4	32.5	32.1	31.0	30.5
11	29.4	29.3	29.1	28.8	29.0	27.8	27.2	27.8	28.1	28.8	31.3	32.4	32.8	31.9	31.3	30.0	29.3	29.1
12	29.2	29.0	29.0	29.0	28.6	27.9	27.9	27.9	28.0	29.6	31.2	32.0	32.1	32.0	31.7	30.5	29.3	29.2
13	29.2	29.0	28.7	28.7	28.6	27.9	27.9	27.5	29.2	31.7	33.3	34.5	33.9	32.7	31.4	29.5	28.6	28.7
14	29.2	29.0	28.7	28.6	27.9	27.2	26.5	26.2	28.3	30.5	32.4	33.2	32.9	32.7	31.7	30.9	29.2	29.0
15	29.5	29.5	29.0	29.0	28.7	28.1	28.0	27.7	29.2	30.9	32.1	32.9	33.2	32.7	32.6	31.2	29.9	29.3
16	29.0	28.7	28.6	28.1	28.3	28.3	28.1	27.8	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	29.0	31.4	32.3	33.5	33.5	33.6	32.3	31.1	29.8	29.2
18	30.1	29.6	29.2	29.0	28.7	27.8	28.0	28.3	29.6	31.8	32.1	33.5	34.5	34.6	33.3	31.5	30.5	29.5
19	29.8	29.6	29.3	29.0	28.9	28.0	27.8	27.8	29.0	31.2	32.3	33.5	33.2	33.1	31.8	30.8	30.5	30.5
20	28.3	28.3	28.3	28.6	28.3	27.8	27.5	28.0	29.8	31.4	32.9	33.5	33.6	32.9	31.7	32.4	32.4	30.5
21	29.2	28.3	28.1	28.0	27.8	26.8	26.1	27.2	29.2	32.7	33.5	33.3	33.1	32.7	32.0	31.2	29.8	29.6
22	29.4	29.4	28.8	28.9	28.9	27.9	27.7	28.6	31.0	32.3	32.6	32.3	31.9	31.3	30.3	28.6	28.3	28.9
23	29.1	28.9	28.9	28.6	27.7	26.0	26.0	27.7	29.1	30.4	31.4	31.9	32.0	31.1	30.0	29.8	29.5	29.7
24	29.4	28.9	28.9	28.6	28.3	27.0	27.4	27.9	29.5	30.7	31.9	32.5	32.6	31.4	30.4	29.1	29.2	29.7
25	28.6	28.8	28.9	28.6	28.5	27.4	27.1	28.2	28.9	30.7	32.0	31.9	31.9	31.4	31.3	30.0	29.5	29.7
26	28.2	28.5	28.2	28.0	27.6	26.4	26.0	26.3	28.9	31.9	32.6	33.0	32.6	31.7	30.4	29.7	28.6	29.2
27	28.9	29.1	28.9	28.8	28.6	27.0	26.6	27.4	29.4	32.0	33.5	34.2	34.1	32.0	30.1	28.6	28.2	29.1
28	28.9	28.9	28.8	28.6	28.6	27.3	27.1	27.7	29.5	32.2	34.8	34.4	34.1	32.6	30.4	28.9	28.5	28.3
29	29.4	29.1	28.9	28.9	28.6	26.3	26.2	27.4	31.6	33.7	35.6	34.8	34.0	32.2	30.4	29.5	28.6	28.9
30	29.1	28.9	28.6	28.2	27.7	25.5	26.0	27.6	30.4	33.1	34.8	34.8	34.4	33.2	31.1	29.7	28.6	30.0
31	29.1	28.8	28.0	28.8	27.4	26.8	26.1	27.0	27.9	29.7	31.6	33.4	33.2	32.6	31.4	30.1	28.6	29.2
平均 Mean	29.12	28.92	28.65	28.53	28.23	27.37	27.14	27.40	28.76	30.55	32.05	32.87	33.01	32.49	31.55	30.38	29.57	29.34

水平磁力 0.29..........+

日	午前 A.M.											正午	午後					
Day.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2	3	4	5	6
1	795	802	803	811	817	801	801	807	814	821	824	827	825	926	822	817	812	811
2	813	816	817	819	818	816	806	805	802	806	810	817	806	915	817	817	819	819
3	831	823	827	827	830	832	822	818	813	808	805	816	820	...	...	828	832	832
4	829	832	831	833	834	829	819	808	806	813	813	813	821	825	831	823	829	828
5	832	835	834	836	839	838	834	826	827	829	817	819	822	830	839	839	836	823
6	835	834	835	836	839	838	837	...	821	821	825	823	820	825	840	849	850	844
7	842	842	842	842	844	845	846	840	839	840	842	836	833	836	846	851	852	850
8	851	852	847	848	848	851	855	845	844	845	850	856	855	849	855	853	844	841
9	849	851	854	848	845	851	846	845	854	864	882	891	884	885	877	868	856	849
10	856	851	846	838	838	837	831	826	823	832	837	845	849	850	849	847	841	841
11	839	839	837	839	838	835	825	819	827	834	837	841	844	837	841	843	841	841
12	840	840	840	838	835	838	834	830	824	824	...	830	836	838	838	840	841	836
13	837	839	841	841	837	832	828	817	802	809	821	827	835	839	844	851	843	837
14	828	829	829	827	826	824	822	820	808	813	819	827	831	835	837	829	824	825
15	830	824	813	825	824	827	822	811	804	803	810	817	831	840	842	844	842	839
16	838	840	838	838	833	840	826	810	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	825	832	832	832	837	844	847	848	842	826
18	833	840	835	832	835	834	824	817	811	812	811	813	824	829	825	817	815	811
19	819	825	824	821	823	823	816	809	804	811	815	818	831	835	839	831	817	805
20	821	821	822	828	829	830	824	815	810	820	827	832	820	811	830	810	772	803
21	813	820	824	821	829	824	814	808	797	798	807	817	823	825	824	823	826	825
22	820	822	822	818	822	817	811	798	895	802	812	821	829	835	841	840	833	828
23	828	824	825	830	830	826	815	809	812	811	822	834	843	845	847	844	838	830
24	826	828	825	825	826	818	812	813	815	815	821	832	833	831	828	826	827	828
25	825	824	826	827	827	820	815	812	806	808	813	822	828	837	834	824	820	825
26	827	827	830	832	826	821	810	797	789	794	802	814	819	815	817	819	817	813
27	823	821	824	825	821	815	802	791	786	795	807	821	836	842	834	829	824	819
28	826	822	821	816	817	818	799	793	786	787	...	819	829	830	829	822	817	813
29	818	821	822	823	822	813	801	794	788	791	795	807	814	822	826	825	825	820
30	824	824	827	824	825	819	805	791	790	798	811	841	851	844	830	824	832	830
31	823	821	825	817	821	813	812	809	804	811	812	816	825	830	830	823	823	823
平均 Mean	8290	8296	8295	8295	8299	8275	8201	8132	8109	8149	8207	8275	8318	8347	8365	8335	8293	8275

AUGUST 1897.

P. M.					夜半	平均	最大		最小		較差	記事
7	8	9	10	11	M. N.	Mean	Maximum		Minimum		Range	Remarks.

MAGNETIC DECLINATION

7	8	9	10	11	M. N.	Mean	Maximum	h m	Minimum	h m	Range	Remarks
27.9	29.7	29.7	30.4	29.4	28.9	29.66	32.6	11 00 a	27.6	8 00 a	5.0	C, S° Late at Night
29.1	29.2	29.1	29.1	28.9	28.9	29.50	34.5	1 00 p	26.0	5 40 a	8.5	A Early in morning, C
28.7	29.8	29.5	29.8	29.0	29.0	29.24	33.5	1 00 p	26.1	8 40 a	7.4	C
...	...	...	...	...	...	28.05	...	...	...	...	...	C
29.5	29.6	29.5	29.9	29.8	29.6	29.65	32.3	2 00 p	27.4	8 00 a	4.9	C
29.3	29.5	29.5	29.8	29.8	29.5	29.72	33.5	2 00 p	27.1	8 10 a	6.4	C
29.3	29.9	29.7	29.9	29.3	29.1	29.21	32.2	2 00 p	25.6	8 00 a	6.6	C
...	...	...	29.9	29.7	30.3	29.41	32.4	2 00 p	26.2	7 50 a	6.2	C
...	...	...	...	30.0	29.0	28.52	...	...	...	...	...	C morning, A afternoon
29.9	30.6	30.6	30.0	29.9	29.6	29.75	32.5	3 00 p	26.9	4 00 a	5.6	A morning, C afternoon
29.9	29.9	29.6	29.4	29.9	29.6	29.65	32.8	1 00 p	27.2	7 00 a	5.6	C
29.3	29.0	29.6	29.4	29.7	29.4	29.60	32.2	1 00 p	27.6	6 35 a	4.6	C
28.9	29.0	29.6	29.8	29.8	29.8	29.91	34.5	Noon	27.5	8 00 a	7.0	C
29.5	29.8	30.2	30.5	29.9	29.6	29.73	33.2	Noon	26.2	8 00 a	7.0	C
29.8	29.8	30.2	29.6	29.6	29.5	30.08	33.2	1 00 p	27.5	7 30 a	5.7	C, A Late at Night
...	...	...	...	...	...	28.36	...	...	...	...	...	C
29.9	30.5	29.9	29.9	29.8	30.1	30.99	...	...	...	...	...	C
29.9	30.1	30.2	30.2	30.1	30.2	30.56	34.9	1 55 p	27.8	6 00 a	7.1	C
30.5	30.5	30.5	29.6	29.5	29.5	30.26	33.8	0 30 p	27.4	7 25 a	6.4	C
30.2	30.5	30.5	30.1	29.8	29.3	30.27	33.9	1 05 p	27.5	6 30 a	6.4	C morning, A afternoon
29.8	30.1	30.5	30.1	30.5	29.8	29.97	34.2	11 10 a	25.8	6 50 a	8.4	C
29.7	29.5	29.4	29.5	29.2	29.1	29.73	32.6	11 00 a	27.1	6 15 a	5.5	C
30.4	29.7	29.7	29.5	29.1	29.4	29.40	32.0	1 00 p	**24.5**	6 25 a	7.5	C
30.1	30.4	30.4	30.0	29.8	29.5	29.73	32.6	1 00 p	26.4	6 22 a	6.2	C
30.4	30.1	29.4	29.7	29.4	29.1	29.65	32.0	11 00 a	27.1	7 00 a	4.9	C, A Late at Night
30.4	30.1	30.0	30.1	29.7	29.2	29.47	33.0	Noon	25.8	6 37 a	7.2	C
29.7	30.0	29.7	29.4	30.0	29.8	29.80	34.2	Noon	26.0	6 30 a	8.2	C
29.4	29.4	29.5	29.5	29.5	29.7	29.86	34.8	11 00 a	26.7	6 42 a	8.1	C
29.7	29.7	29.8	29.7	29.5	29.5	30.08	**35.6**	11 00 a	25.8	6 25 a	9.8	C
30.7	30.4	29.5	29.8	29.5	28.9	30.02	35.1	0 30 p	25.1	6 35 a	10.0	A
29.4	28.9	29.7	30.1	29.4	30.0	29.47	33.4	Noon	26.1	7 00 a	7.3	A
29.68	29.84	29.83	29.81	29.64	29.48	29.70	33.39		26.59		6.80	

HORIZONTAL MAGNETIC INTENSITY

7	8	9	10	11	M. N.	Mean	Maximum	h m	Minimum	h m	Range	Remarks
817	819	837	856	842	827	8181	871	9 42 p	790	0 00 a	.03 81	C, S° Late at night
822	824	828	825	827	830	8164	830	M.N.	796	0 50 a	34	A Early in morning, C
828	820	824	826	828	828	8235	836	5 20 a	805	9 45 a	31	C
830	821	831	832	831	835	8253	835	M.N.	806	9 00 a	29	C
833	834	832	831	832	832	8316	839	5 00 a	817	11 00 a	22	C
842	841	842	841	841	840	8356	853	4 20 p	820	8 10 a	33	C
847	846	848	848	850	848	8440	854	4 45 p	833	0 47 p	21	C
843	839	841	844	848	849	8480	856	0 20 p	839	8 00 p	17	C
857	859	846	846	843	846	8582	**893**	0 05 p	845	5 00 a	48	C morning, A afternoon
839	843	843	839	839	841	8409	859	0 55 a	821	8 40 a	38	A morning, C afternoon
838	842	844	845	844	841	8380	847	0 47 p	817	8 10 a	30	C
835	836	836	536	836	836	8355	842	2 45 p	818	10 47 a	24	C
841	835	835	833	829	836	8329	851	4 00 p	817	8 00 a	34	C
824	821	824	826	829	835	8255	837	3 00 p	807	8 40 a	30	C
834	839	841	842	836	838	8282	844	4 00 p	802	8 50 a	42	C, A Late at Night
...	...	...	...	...	...	8329	...	...	...	...	...	C
816	808	818	828	832	832	8312	...	...	...	...	...	C
806	808	810	814	818	818	8205	843	2 15 a	806	7 00 p	37	C
804	808	808	813	817	819	8181	839	3 00 p	800	8 40 a	39	C
818	818	818	817	816	810	8176	837	11 50 a	**769**	5 12 p	68	C morning, S° afternoon
823	820	819	820	819	820	8183	829	5 00 a	795	9 25 a	34	C
827	827	827	827	832	831	8224	846	3 25 p	793	8 50 a	53	C
829	830	831	828	832	828	8288	848	2 55 p	808	9 45 a	40	C
829	839	839	826	826	826	8256	833	1 00 p	812	7 00 a	21	C
818	820	833	829	829	828	8229	842	2 15 p	806	9 00 a	36	C, A Late at Night
809	813	817	817	822	824	8146	832	4 25 a	789	9 00 a	43	C
826	826	823	819	820	826	8190	843	1 50 p	781	8 40 a	62	C
809	815	815	811	812	818	8141	830	2 00 p	785	9 20 a	45	C
817	811	817	824	826	823	8144	826	3 00 p	787	8 52 a	39	C
828	826	836	838	837	837	8247	852	1 05 p	787	8 40 a	65	A
815	819	819	814	821	818	8185	831	2 40 p	801	8 45 a	30	A
8268	8272	8294	8298	8305	8307	8272	8441		8052		.03 388	

明治三十年八月

鉛直磁力　0.34…………+

日 Day	午前 A. M. 1	2	3	4	5	6	7	8	9	10	11	正午 Noon	午後 1	2	3	4	5	6
1	347	348	347	348	352	346	343	336	314	311	313	333	334	340	345	347	347	349
2	353	352	353	353	353	351	345	345	328	331	334	…	…	…	…	…	…	…
3	338	337	336	338	341	338	333	331	321	321	321	324	329	322	326	331	331	328
4	322	322	322	324	328	325	322	318	313	320	318	325	324	325	324	329	332	332
5	325	328	331	330	331	335	330	330	343	346	346	346	349	353	358	359	353	351
6	355	355	355	346	354	357	355	…	364	370	376	373	374	381	386	389	387	386
7	385	385	385	385	385	389	391	379	376	376	380	374	374	377	382	385	385	380
8	384	386	384	384	386	386	386	371	363	367	365	370	370	370	371	368	368	367
9	369	371	371	369	369	371	369	356	361	360	364	368	369	368	358	358	356	356
10	368	365	361	363	361	361	358	356	348	349	351	353	351	351	351	351	354	354
11	360	358	360	361	363	358	356	354	349	353	354	354	356	356	361	360	356	358
12	360	362	362	362	362	362	360	354	349	347	347	352	356	360	360	360	360	362
13	365	363	365	366	365	365	363	355	336	340	346	347	351	357	359	359	353	351
14	359	361	261	361	363	363	359	353	340	344	345	345	345	347	349	345	347	347
15	359	361	369	361	361	361	359	353	347	344	347	355	361	363	363	363	365	365
16	368	368	370	375	375	381	377	364	…	…	…	…	…	…	…	…	…	…
17	…	…	…	…	…	…	…	…	363	363	363	365	367	376	376	373	378	369
18	379	381	383	381	381	381	377	372	366	368	377	379	379	379	375	364	366	366
19	382	387	385	382	385	385	382	380	366	371	377	377	380	373	371	366	366	364
20	385	385	387	392	390	390	387	385	364	367	376	371	364	364	364	367	362	371
21	379	379	379	379	381	379	372	365	353	353	357	360	360	365	365	365	367	369
22	375	378	375	375	375	375	371	366	358	361	366	371	375	373	373	368	366	363
23	375	373	375	380	375	370	363	363	358	360	363	370	365	365	363	363	363	363
24	375	375	375	377	372	369	364	362	362	356	354	354	364	369	364	369	369	369
25	361	363	363	366	368	363	358	353	335	347	352	358	358	358	360	355	355	358
26	353	355	360	358	355	350	350	348	340	342	350	353	358	358	350	348	348	350
27	352	355	352	352	347	344	334	332	315	337	352	364	373	371	359	354	352	350
28	361	360	358	354	359	355	345	336	337	333	336	351	355	351	351	344	340	340
29	351	253	354	354	355	345	335	324	321	325	332	341	346	345	345	344	345	344
30	353	354	355	353	354	347	332	323	326	329	340	350	354	348	343	338	343	345
31	348	348	350	349	351	347	346	339	336	337	344	348	350	349	348	345	347	348
平均 Mean	3615	3623	3624	3626	3632	3616	3574	3518	3451	3476	3515	3562	3583	3591	3586	3575	3574	3571

空中電氣

日 Day	午前 A. M. 1	2	3	4	5	6	7	8	9	10	11	正午 Noon	午後 1	2	3	4	5	6
1	4	10	8	8	16	23	26	11	6	5	5	6	3	2	2	4	2	4
2	4	4	3	−1	1	7	4	2	3	3	4	-3	1	2	1	3	4	6
3	−2	−1	−2	−3	−3	0	3	4	6	7	4	0	3	3	4	6	6	6
4	4	4	8	8	9	16	18	12	8	6	3	8	4	5	4	17*	16*	21*
5	15	14	11	11	11	12	11	7	4	10	14	18	9	5	9	10	8	16
6	7	9	5	9	9	7	7	4	6	2	0	7	6	2	4	6	7	10
7	6	11	10	6	4	7	3	13	6	7	0	1	1	2	3	4	6	11
8	4	3	3	4	2	4	7	4	7	4	2	4	2	2	1	1	2	4
9	8	9	9	8	11	17	17	15	12	7	1	−3	2	1	3	3	4	4
10	12	12	12	12	16	17	14	12	8	2	1	2	2	2	1	1	1	1
11	9	8	9	11	9	11	11	10	4	1	1	0	1	1	1	0	0	2
12	11	10	11	11	11	15	10	6	6	4	4	3	4	3	3	3	3	5
13	4	5	6	4	10	15	13	7	3	3	…	3	5	3	4	5	−	−
14	7	7	6	17	24	26	14	9	4	4	7	4	4	4	3	+	±	±
15	+	+	±	±	±	2*	13	13	13	6	7	6	4	4	3	1	4	5
16	7	2	7	6	20	7	13	9	5	5	10	5	7	5	3	3	5	7
17	12	9	11	12	18	23	25	9	11	12	8	8	4	9	7	7	5	8
18	10	8	10	13	15	16	15	11	7	5	7	6	4	3	3	4	4	8
19	11	10	10	11	15	25	22	23	10	3	2	3	5	3	2	2	5	10
20	12	11	11	11	20	21	13	9	5	2	3	0	0	0	0	1	2	+
21	9	7	8	10	9	13	11	4	8	5	4	0	2	4	−	−	−	+
22	3	4	5	6	8	15	13	8	5	5	7	3	2	1	1	0	2	2
23	6	7	7	7	11	7	8	6	4	1	1	…	2	2	-1	−1	−1	1
24	5	5	5	6	7	9	10	7	5	3	0	0	1	1	0	0	1	3
25	8	8	8	9	10	…	…	…	…	…	…	…	…	…	…	…	…	…
26	…	…	…	…	…	…	…	…	…	…	…	5	6	5	5	6	8	9
27	17	12	8	10	17	10	−21*	−14*	−2*	2*	−1*	−2*	4	6	4	11	5	12
28	9	5	11	14	13	16	20	17	15	4	2	2	3	4	6	+	±	±
29	4	4	2	8	11	22	9	10	4	3	7	4	2	2	0	4	5	11
30	3	6	5	8	9	9	14	15	6	2	2	5	2	3	4	5	9	9
31	0	4	5	±	±	−	−1*	3	5	4	5	6	3	3	2	2	1	3
平均 Mean	7.2	7.1	7.3	8.4	11.2	13.7	12.7	9.3	6.6	4.5	4.1	3.9	3.3	3.1	2.8	3.5	3.9	6.5

AUGUST 1897.

VERTICAL MAGNETIC INTENSITY.

P. M. 7	8	9	10	11	夜半 M.N.	平均 Mean	最大 Maximum	h m	最小 Minimum	h m	較差 Range	記事 Remarks.
352	356	362	368	364	356	3441	368	10 00 p	311	10 00 a	$.0^3 57$	C, A Late at night.
339	340	335	339	340	338	3429	...	...	...	...	...	A Early in morning, C.
332	327	330	330	328	327	3301	341	5 00 a	321	9 00 a	20	C
329	322	328	326	324	329	3243	332	6 00 p	318	11 00 a	14	C
349	353	352	355	355	355	3443	359	4 00 p	325	1 00 a	34	C
384	386	386	386	386	386	3729	389	4 00 p	346	4 00 a	43	C
380	382	383	382	382	382	3818	391	7 00 a	374	noon	17	C
367	365	370	370	370	373	3734	386	7 00 a	363	9 00 a	23	C
361	366	363	364	364	366	3645	371	6 00 a	356	8 00 a	15	C morning, A afternoon.
354	358	359	356	358	359	3562	368	1 00 a	348	9 00 a	20	A morning, C afternoon.
358	361	363	361	363	360	3580	363	5 00 a	349	9 00 a	14	C
358	360	362	362	362	362	3585	362	4 00 a	347	11 00 a	15	C
357	353	357	357	353	361	3560	866	4 00 a	336	9 00 a	30	C
349	349	349	353	355	359	3520	363	6 00 a	340	9 00 a	23	C
365	367	369	371	367	369	3606	371	10 00 p	344	10 00 a	27	C
...	...	...	...	...	...	3722	...	...	...	...	...	C
369	369	373	382	382	382	3719	...	...	...	...	...	C
368	375	381	381	381	383	3760	383	3 00 a	364	4 00 p	19	C
368	375	380	382	382	382	3770	385	6 00 a	364	6 00 p	21	C
378	376	376	378	376	376	3763	392	4 00 a	362	5 00 p	30	C morning, A afternoon.
367	367	372	374	376	372	3690	381	5 00 a	353	9 00 a	28	C
363	366	366	371	371	375	3698	378	2 00 a	358	9 00 a	20	C
365	370	370	370	373	375	3679	380	4 00 a	358	9 00 a	22	C
372	372	372	372	374	372	3680	377	4 00 a	354	noon	23	C
358	361	363	365	363	363	3585	368	5 00 a	335	9 00 a	33	C
350	358	360	363	363	366	3536	366	m.n.	340	9 00 a	26	C
355	357	357	357	355	358	3514	373	1 00 p	315	9 00 a	58	C
342	348	348	346	347	350	3478	360	5 40 a	330	10 37 a	30	C
344	346	353	354	353	352	3442	355	5 00 a	321	9 00 a	34	C
347	347	354	353	354	351	3455	355	3 00 a	323	8 00 a	32	A
348	351	351	350	351	354	3473	354	M.N.	336	9 00 a	18	A
3576	3594	3615	3626	3624	3631	3583	3692		3425		$.0^3 266$	

ATMOSPHERIC ELECTRICITY.

P. M. 7	8	9	10	11	夜半 M.N.	平均 Mean	最大 Maximum	h m	最小 Minimum	h m	較差 Range	記事 Remarks.
9	9	8	7	7	5	7.9	32	7 45 a	0	2 00 p	32	—
4	2	1	0	-1	-2	2.4	9	6 10 a	-3	4 25 a	12	●•4.35a–840a <8p–10p
2	1	2	1	0	0	2.0	8	9 30 a	-4	4 25 a	12	≡°5.20a–7.25a
+	19	17	17	18	15	10.1	92	6 25 p	-6	6 55 p	98	>4p–6p <4p–M.N
18	16	32	17	13	7	12.4	33	9 00 p	3	8 55 a	30	–<–2a ≡°●°4.20a–8.50a <9p–10p T<9.30–9.37p [<7p–M.N.
19*	37*	11	4	7	5	6.1	758	7 30 p	-2	10 45 a	>60	<2a–3a ●°5.40–6.45a, 715a–8.40a, 6.55–8.30p
4	3	4	6	—	10	5.6	22	11 25 p	-40	11 00 p	62	●°4a–9.25a, 1105a–3.20p ●°4.15p–●–●²11p–●–
7	8	8	10	8	8	4.5	11	10 00 p	0	2 30 p	11	–●–●°–5.30a ●°6.30a–7.20,a 9.55a–11.15a] <T<T<² 10.35p–11p]
8	11	11	11	11	11	8.0	19	7 10 a	-3	noon	22	—
4	6	9	8	9	9	7.2	18	6 10 a	-1	11 35 a	19	≡°4.50a–7.50a.
8	+	—	10	10	11	5.8	36	8 35 p	-15	8 55 p	51	≡°3.55a–≡–2≡°–8.30a <7.p–8.p ●°8.30p–9.10p
6	6	7	6	7	6	6.7	16	5 25 a	0	10 05 a	16	●°8.05a– 8·25a
—	6	10	11	10	9	6.8	>119	6p–7 p	<-77	6p–7 p	>196	≡°4.55a–7.55a ⊤°4.03p–5.45p ●°5.55p–7.10p [p–
±	±	—	±	—	±	9.3	>121	...	<-69	...	>190	⊤°3.35p–T<•4.20p T<–T<²6.05p–T<°–6 40p <8p ●°●² ●4.35
4	5	5	7	7	7	6.3	>121	...	<-77	...	<198	–●–●°–0.30a ●°1.30a–●²3.50a–●°–5.35a ●°8.40p–9.40p
10	8	10	12	13	17	8.2	26	5 20 a	0	2 25 a	26	●°0.37a, 4.30a, 9.55a
13	12	9	7	9	9	10.7	28	7 00 a	1	10 17 p	27	●°3.20a–4.10a 6.35a–6.50a 7.45a–8.20a
11	11	12	12	11	10	9.0	24	6 35 a	2	2 35 p	22	≡°4.15a–≡²–≡–7.20a
15	14	13	13	13	12	10.5	32	6 16 a	0	11 20 a	32	≡5.15a–≡²–≡°–7.25a <9p–10p
—	6	7	7	8	7	7.1	28	6 05 p	-56	6 30 p	84	≡°4.50a–6.50a <9.p–11p
3	3	3	7	4	0	5.7	>109	4 23 p	<-69	3 05 p	>178	●°3.50p–4.10p, 9,55p–11.20p ⊤2.40p–T<3.50p ⊤4.05–5.15p
3	+	±	3	4	7	4.9	82	8 08 p	-27	9 08 p	109	–<–3a ≡°5.20a–6.50a ●°4.10p–4.25p [<7p–M.N.
1	2	2	3	4	5	3.7	12	6 05 a	-2	4 40 p	14	≡°5.40a–6.30a ●°6.35a–6.50a [⊤°7p <7p–11p.
6	8	8	7	6	8	4.6	13	6 50 a	-2	11 43 a	15	—
...	...	...	...	...	...	8.6	...	...	...	...	...	—
7	13	6	5	12	16	7.9	...	...	...	...	...	≡°5.20a–8.30a ●°7.10p–7.25p,10.15p–10.50p
11	17	21	6	14	21	11.4	32	M.N.	-22	7 00 a	54	●°2.40a–3.20a, 5.30a–9a ●°6.35p– <8p–10p
—	1*	—	9	-2	0	8.2	>157	6 00 p	<-126	6 00 p	>283	●°●4.15p–9.55p– ⊤ ⊤°0.42p–5.20p <8.50p–T< <–10p
6	4	7	5	4	4	5.9	33	6 25 a	-5	7 40 p	38	–●°–6.35a ●°4.10p–7p,8 45p–11p <2a 11p–M.N.
8	5	8	6	6	6	6.5	18	6 30 a	0	0 50 p	18	●°0.30a–1.40a ≡°5.15a–9.30a T<7.50p–8.25p <9p
7	6	6	3	2	2	3.6	...	...	...	...	...	●°1.50a–●–●²4.30a–●–●°–9.35a ●°7.50p– <10p–11p
7.8	8.9	9.1	7.6	7.6	7.8	6.9						

明治三十年九月

偏角 4°W+

日 Day	午前 A. M. 1	2	3	4	5	6	7	8	9	10	11	正午 Noon	午後 1	2	3	4	5	6
1	29.6	28.8	28.5	28.5	28.4	27.3	26.3	26.2	28.8	31.3	34.1	35.3	34.9	33.3	30.6	29.4	28.4	28.7
2	28.8	28.8	28.2	27.6	27.2	25.9	26.5	26.6	28.1	30.3	32.5	33.1	32.5	31.8	30.3	30.0	29.0	29.1
3	29.0	28.8	28.5	28.4	28.2	26.9	26.5	26.7	28.8	31.3	32.7	33.7	33.3	31.8	30.4	29.4	28.5	28.7
4	29.0	28.8	28.1	28.1	27.9	26.7	26.6	27.0	28.4	30.3	32.2	32.7	31.9	31.6	30.3	30.3	30.3	30.0
5	27.5	27.2	27.3	26.9	26.0	26.6	28.1	29.4	30.0	31.0	33.3	34.0	34.4	33.0	31.8	30.0	29.3	29.6
6	28.8	28.8	29.1	29.4	28.4	27.3	28.1	27.8	28.4	30.3	32.9	33.6	33.0	31.8	30.6	30.0	29.4	30.0
7	29.0	28.8	28.7	28.4	28.1	27.6	27.8	29.6	30.3	31.8	32.4	32.5	32.1	31.3	30.2	29.1	28.8	30.0
8	29.1	29.0	28.5	28.5	28.1	27.3	27.3	28.8	29.6	31.5	33.0	33.3	33.7	31.6	30.3	29.4	28.8	30.0
9	29.6	29.4	28.8	...	...	...	26.3	27.8	29.6	31.5	33.1	33.4	32.5	31.5	30.3	30.0	29.6	30.0
10	29.3	28.8	28.7	28.8	28.4	27.2	26.6	26.6	28.2	30.3	32.5	32.7	32.1	30.4	29.9	29.3	29.1	29.9
11	29.0	28.5	28.1	28.5	27.8	26.7	26.6	28.5	29.6	31.5	33.4	34.7	35.9	32.9	30.3	39.3	29.0	...
12	29.0	28.2	26.9	28.5	29.7	27.0	27.6	...	31.9	34.7	36.5	36.1	34.7	33.1	31.9	31.0	...	...
13	28.8	28.5	28.8	...	...	...	...	...	29.4	31.6	33.1	33.1	32.4	30.7	30.3	28.4	28.1	29.9
14	29.6	28.8	28.7	28.7	28.2	26.6	26.6	26.2	28.7	31.3	33.6	33.6	33.1	31.5	30.0	28.5	28.1	39.7
15	28.7	29.6	29.1	29.9	29.0	27.8	27.8	27.9	29.9	31.8	33.0	33.1	33.0	31.8	30.3	28.7	28.8	30.0
16	...	...	...	...	...	28.1	29.0	29.7	31.0	34.3	35.6	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	29.4	31.0	31.9	32.5	32.5	31.8	30.3	29.0	29.0	29.6
18	29.1	28.8	28.7	28.2	28.1	26.7	27.8	27.8	29.6	31.0	32.7	33.0	32.4	31.6	30.9	29.7	29.3	29.7
19	28.8	28.8	29.0	28.4	27.9	27.5	27.2	27.3	28.1	30.0	31.0	31.2	31.2	30.7	30.0	29.1	29.6	29.7
20	29.3	28.2	28.1	28.2	28.2	27.8	27.3	26.6	27.3	29.1	30.3	30.6	31.8	32.4	31.3	30.6	30.6	30.7
21	29.4	29.4	29.3	28.8	28.7	28.2	29.0	29.6	29.6	30.9	31.2	31.5	31.8	31.6	30.6	30.3	30.0	30.3
22	29.0	28.4	28.1	27.5	27.2	38.1	27.6	27.6	28.1	30.3	31.2	31.5	31.8	30.6	30.2	29.9	30.0	29.7
23	28.8	29.1	29.3	29.1	29.0	28.8	27.9	27.3	29.3	30.4	30.4	30.4	31.2	31.3	31.3	30.9	30.3	30.3
24	28.4	28.8	29.6	28.8	29.3	28.8	28.1	28.4	28.8	30.3	31.0	32.2	33.0	33.3	32.5	30.9	30.3	31.0
25	29.6	29.6	29.4	29.3	29.4	28.8	29.1	30.3	31.3	32.2	32.5	33.7	32.9	31.5	30.2	29.0	29.0	29.4
26	28.8	...	28.5	28.4	28.4	28.2	27.9	28.1	29.3	30.4	31.8	32.2	31.8	30.6	29.0	28.7	29.9	30.2
27	29.3	29.3	28.8	29.0	28.8	28.5	28.5	28.4	29.3	30.9	32.1	32.5	32.4	31.5	30.3	29.7	29.6	30.6
28	29.6	29.6	29.4	28.8	28.7	28.5	27.6	27.8	28.5	30.4	31.0	31.8	31.5	30.6	28.4	27.9	29.0	30.2
29	29.0	28.5	28.2	28.1	28.1	27.9	27.6	27.3	28.1	30.3	32.5	34.0	33.7	32.5	30.6	29.1	29.3	30.0
30	29.3	29.3	29.1	28.7	...	...	...	...	...	...	...	...	...	...	...	...	...	...
平均 Mean	29.04	28.84	28.62	28.52	28.29	27.57	27.53	27.90	29.22	31.10	32.53	32.93	32.76	31.72	30.47	29.56	29.30	29.88

水平磁力 0.29..........+

日 Day	1	2	3	4	5	6	7	8	9	10	11	Noon	1	2	3	4	5	6
1	817	819	820	823	820	815	807	796	790	794	807	820	833	841	840	833	826	823
2	828	823	823	818	815	813	802	794	791	794	794	803	819	820	821	822	820	818
3	821	821	821	823	823	821	810	803	803	810	816	823	823	835	836	836	834	826
4	811	821	815	812	809	809	799	795	789	809	819	819	832	839	838	822	806	813
5	826	822	822	833	815	804	797	776	785	789	784	781	794	812	815	818	813	[illegible]
6	802	802	802	803	799	798	786	779	777	782	790	804	809	810	811	802	802	803
7	804	806	810	806	806	804	797	786	784	791	802	812	820	829	819	815	811	808
8	812	812	809	812	809	804	792	785	784	792	794	806	810	806	814	820	821	815
9	815	813	813	810	...	...	802	793	783	791	798	813	825	837	829	813	807	803
10	815	815	816	819	819	815	807	794	788	794	804	813	822	828	825	821	819	919
11	826	826	828	821	830	832	818	801	788	797	804	802	789	812	819	818	811	795
12	796	813	805	796	807	807	799	777	779	783	790	785	790	790	785	784	790	790
13	803	803	800	812	808	793	786	776	773	778	779	800	814	820	819	814	809	797
14	805	806	807	807	808	804	792	801	798	798	805	823	824	832	838	832	820	813
15	777	790	795	798	798	798	789	777	767	767	784	802	814	817	813	809	800	799
16	805	804	801	801	805	804	794	785	778	779	795	809	816	821	815	808	805	805
17	807	805	805	805	807	804	804	796	790	796	800	809	811	811	820	821	812	804
18	810	808	807	810	806	805	800	794	794	800	801	807	819	830	831	824	818	814
19	817	815	810	815	815	810	809	803	798	797	796	808	820	822	828	828	824	818
20	819	819	817	811	813	820	820	813	798	798	800	817	818	818	815	810	803	803
21	813	813	815	816	818	821	822	819	810	811	809	817	828	837	838	830	823	810
22	813	817	827	829	822	820	815	806	790	778	791	809	824	830	829	816	803	800
23	814	813	814	818	821	821	821	820	802	797	796	801	806	806	810	801	788	787
24	804	802	805	803	808	808	809	805	792	790	...	795	803	797	801	801	794	787
25	807	802	798	797	798	795	789	783	786	787	792	803	814	825	824	821	812	809
26	811	811	809	810	811	807	807	807	807	809	808	815	819	822	815	809	805	805
27	814	816	816	816	818	820	824	819	812	824	837	816	851	851	844	835	821	811
28	822	814	823	816	810	818	816	798	793	802	816	824	830	836	832	824	812	806
29	815	824	824	824	823	823	824	816	811	814	823	829	832	831	829	823	816	816
30	819	821	822	823	...	...	...	...	...	...	...	...	...	...	...	...	...	...
平均 Mean	8116	8125	8126	8129	8122	8105	8047	7964	7909	7949	8012	8102	8176	8230	8225	8176	8112	8070

SEPTEMBER, 1897.

MAGNETIC DECLINATION.

P. M. 7	8	9	10	11	夜半 M. N.	平均 Mean	最大 Maximum	h m	最小 Minimum	h m	較差 Range	記事 Remarks
29.6	29.4	29.7	29.4	29.6	29.1	29.80	35.3	Noon	26.0	7 34 a	9.3	C
29.9	29.7	29.7	29.4	29.6	29.7	29.35	33.1	Noon	25.9	6 00 a	7.2	C
28.8	29.4	29.1	28.7	29.0	29.0	29.39	33.7	Noon	26.0	7 17 a	7.7	C
30.3	30.3	30.0	29.1	28.4	28.1	29.43	33.1	11 24 a	26.6	7 00 a	6.5	C
30.0	30.3	29.6	30.0	30.0	29.3	29.77	34.6	0 32 p	25.9	6 18 a	8.7	A
30.0	29.6	30.3	30.2	29.9	29.4	29.88	33.9	11 44 a	26.7	7 18 a	7.2	A
30.2	29.9	29.9	30.0	29.9	29.6	29.83	32.5	Noon	27.5	6 50 a	5.0	C
30.3	30.3	30.3	30.3	30.0	29.6	29.94	33.9	0 38 p	27.0	7 18 a	6.9	A morning, C afternoon
30.0	29.1	29.6	29.9	29.7	29.6	30.06	...	...	...	...	...	C
29.7	29.9	29.9	29.9	29.6	28.8	29.44	33.0	11 20 a	26.5	7 23 a	6.5	C
...	...	...	...	...	...	30.02	36.1	1 10 p	26.6	7 00 a	9.5	A morning, C afternoon
...	...	...	...	...	29.3	31.01	**36.5**	11 00 a	26.9	3 00 a	9.6	S° morning, C afternoon
30.0	29.9	30.3	30.3	30.0	30.0	30.19	...	...	...	...	...	C
30.3	28.8	30.9	30.3	29.9	29.3	29.62	34.0	0 10 p	**23.9**	7 04 a	10.1	C oa–7a, S° 7a–M.N.
...	...	...	...	...	...	30.01	33.6	11 22 a	27.6	6 40 a	6.0	A
...	...	...	...	...	...	31.28	...	...	...	...	...	
29.6	29.4	29.6	29.9	29.6	29.4	30.28	...	...	...	...	...	A
29.7	29.7	29.7	29.6	29.7	29.1	29.69	33.1	11 30 a	26.6	6 24 a	6.5	A morning, C afternoon
29.6	29.6	29.7	29.7	29.6	29.3	29.29	31.3	0 08 p	27.2	7 00 a	4.1	A morning, C afternoon
30.4	30.3	30.3	30.2	30.0	29.7	29.55	32.4	2 00 p	26.6	8 00 a	5.8	C
30.3	30.7	30.9	30.7	30.3	29.4	30.10	32.1	0 40 p	28.1	6 33 a	4.0	C oa–6a, A 6a–8p, C 8p–M.N.
29.6	29.6	29.6	29.7	29.7	29.6	29.36	31.9	0 30 p	27.0	8 15 a	4.9	A
29.4	30.3	29.9	29.9	29.4	28.7	29.70	31.8	1 35 p	27.3	8 00 a	4.5	A
29.4	30.3	30.3	30.3	30.0	29.6	30.14	33.3	2 00 p	27.9	8 30 a	5.4	A
29.3	29.4	29.7	29.6	29.6	28.7	30.15	33.9	0 08 p	28.7	4 32 p	5.2	C morning, A afternoon
30.3	30.2	29.9	29.9	29.9	29.3	29.64	32.2	Noon	27.8	6 50 a	4.4	C
30.6	30.3	30.6	30.3	30.2	29.6	30.05	32.9	0 16 p	28.2	7 15 a	4.7	C
29.7	29.4	29.6	29.7	29.7	29.3	29.45	31.8	0 18 p	27.6	7 00 a	4.1	C
29.6	29.7	29.9	29.7	29.9	29.6	29.72	34.0	Noon	27.2	7 46 a	6.8	C
...	...	...	...	...	...	29.10	...	...	...	...	...	
29.86	29.82	29 96	29 87	29.73	29.31	29.80	33.36		26.94		6.42	

HORIZONTAL MAGNETIC INTENSITY.

P. M. 7	8	9	10	11	夜半 M. N.	平均 Mean	最大 Maximum	h m	最小 Minimum	h m	較差 Range	記事 Remarks
825	822	823	825	824	825	8195	845	2 20 p	787	8 40 a	$0^{3}58$	C
819	818	816	820	819	819	8137	828	1 00 a	789	8 40 a	39	C
818	816	823	816	815	809	8201	847	2 32 p	799	8 40 a	48	C morning, A afternoon
811	809	808	811	832	828	8148	845	2 40 p	785	8 40 a	60	C morning, A afternoon
782	790	799	799	802	799	8025	838	3 48 a	776	8 00 a	62	A
802	806	808	806	810	811	8002	817	1 45 p	776	8 40 a	41	A
806	810	811	808	809	811	8069	829	2 00 p	781	8 40 a	48	A
816	817	818	818	814	817	8080	821	5 00 p	782	8 30 a	39	C
802	811	807	811	811	813	8091	838	1 45 p	781	8 48 a	57	A
822	825	826	824	825	828	8160	828	2 00 p	787	8 40 a	41	C
794	812	811	808	802	791	8098	836	5 45 a	785	8 43 a	51	A morning, S° afternoon
789	791	792	796	798	799	7929	818	2 35 a	775	7 55 a	43	S° oa–9a, A 9a–M.N.
798	798	799	800	801	804	7993	820	2 00 p	773	8 30 a	47	A
798	772	765	766	765	773	8020	840	3 25 p	**762**	11 05 p	78	C oa–7a, S° 7a–M.N.
798	803	804	803	802	806	7963	818	1 25 p	767	9 00 a	51	A
803	798	796	800	803	803	8014	822	2 03 p	776	8 48 a	46	A
798	800	803	805	805	806	8052	823	3 30 p	790	8 40 a	33	A
813	815	815	813	813	816	8110	831	2 20 p	790	8 50 a	41	A
820	822	821	823	822	824	8152	830	3 18 p	795	10 18 a	35	A
809	809	812	811	813	815	8117	824	1 16 p	798	9 25 a	26	A
816	809	802	797	806	813	8164	838	2 55 p	796	9 25 p	43	C oa–8a, A 8a–M.N.
806	811	811	808	808	808	8113	835	2 25 p	776	9 41 a	59	A
792	784	790	809	797	800	8045	823	6 48 a	780	6 35 p	43	A
796	783	784	787	782	786	7966	816	5 14 a	781	10 42 p	35	A
810	815	809	824	810	814	8052	831	2 24 p	780	8 40 a	51	C morning, A afternoon
805	808	813	814	813	815	8106	822	2 28 p	802	8 46 a	20	C
809	801	797	804	808	816	8212	**853**	1 30 p	797	8 32 p	56	C
816	821	816	812	812	817	8162	836	2 05 p	793	9 00 a	43	A
814	814	816	817	821	823	8209	834	1 28 p	810	8 22 a	24	C
...	...	...	...	...	...	8212	...	...	...	...	...	C
8064	8060	8067	8081	8033	8100	8091	8305		7851		$0^{3}454$	

明治三十年九月

鉛直磁力　0.34...........+

日	午前 A. M.											正午	午後					
Day	1	2	3	4	5	6	7	8	9	10	11	Noon	1	2	3	4	5	6
1	354	355	354	355	354	353	344	330	315	323	339	344	350	350	349	340	337	337
2	350	350	350	346	346	348	342	337	337	337	340	346	355	353	350	350	347	347
3	351	351	351	351	352	351	342	334	326	326	328	337	348	350	341	337	337	337
4	344	350	345	342	343	342	339	334	330	335	335	329	329	329	335	329	328	332
5	344	343	341	344	333	332	329	322	325	326	323	325	327	347	346	341	336	333
6	344	345	344	345	340	340	338	332	326	325	326	338	346	346	339	332	339	337
7	339	339	341	339	339	337	336	335	330	335	344	342	342	342	339	336	336	330
8	341	341	340	342	341	340	335	331	330	334	341	344	344	342	344	344	343	340
9	342	342	344	...	...	...	336	330	332	335	341	347	352	348	342	333	332	332
10	342	344	344	345	344	342	335	331	326	325	328	334	344	345	340	337	337	334
11	335	338	338	334	340	338	329	323	325	328	338	336	335	345	345	340	336	328
12	334	340	335	337	343	339	333	329	323	328	335	338	339	339	337	334	335	334
13	342	342	341	344	342	339	334	326	327	326	332	337	340	344	341	339	332	329
14	334	334	337	338	338	334	331	325	319	319	327	337	338	337	337	331	338	325
15	340	342	343	343	342	339	335	329	325	328	340	344	348	347	344	339	333	334
16	337	336	336	337	337	337	334	328	325	325	337	340	342	341	337	336	335	334
17	341	341	242	342	341	341	340	338	337	338	340	340	344	344	345	344	340	337
18	345	342	341	342	342	341	337	335	334	335	338	341	347	350	347	341	339	334
19	342	342	341	341	340	340	338	336	336	337	337	342	346	348	348	344	342	337
20	339	339	339	339	339	340	339	336	331	330	331	334	347	336	339	337	336	335
21	341	341	343	343	343	343	343	341	337	336	335	339	341	343	344	343	339	336
22	345	345	346	345	345	343	342	339	331	329	337	345	350	350	345	341	337	334
23	344	344	344	344	344	340	336	336	331	329	329	331	332	333	336	337	335	336
24	345	345	345	345	348	351	351	351	345	340	337	345	351	345	345	347	347	341
25	359	352	353	355	353	352	348	344	344	345	348	352	353	353	347	344	344	338
26	341	344	345	345	344	244	342	342	341	344	349	350	350	352	348	346	344	344
27	347	349	349	349	350	350	351	351	346	346	351	351	351	351	351	346	346	342
28	354	354	356	354	354	354	353	347	339	341	351	253	351	354	354	351	346	346
29	351	353	354	353	353	354	351	346	342	339	342	342	347	351	351	350	346	346
30	355	352	353	353	...	...	...	...	...	...	...	...	...	...	...	...	...	...
平均 Mean	3441	3445	3445	3445	3439	3430	3394	3351	3216	3326	3372	3408	3441	3453	3437	3403	3383	3362

空中電氣

日	午前 A. M.											正午	午後					
Day	1	2	3	4	5	6	7	8	9	10	11	Noon	1	2	3	4	5	6
1	5	14	10	11	22	31	35	15	8	7	7	6	6	3	3	1	2	6
2	12	10	10	10	12	15	8	6	4	5	3	4	2	−2*	62*	8	5	7
3	7	3	1	1	8	11	10	12	8	4	2	−1	3	3	0	3	6	7
4	5	7	5	7	10	14	13	7	7	6	3	3	1	−1	0	3	3	10
5	13	4	...	...	...	...	...	28	2	14	6	...	...	...	...	...	...	...
6	19	12	5	9	15	23	20	−75*	−18*	+14*	−5*	0*	−31*	1*	9*	−20*	−49*	−16*
7	1	3	7	8	4	−3*	2	9	8	4	3	4	3	2	4	5	5	5
8	15*	14*	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	0*	−1*	−2*	3*	9	5	7	5	4	3	0	0	−3	2
10	18	15	18	29	...	34	37	18	17	14	8	22	21	11	2	4	6	11
11	72	50	58	56	61	56	58	44	30	12	4	20	8	9	14	20	20	36
12	52	50	42	42	46	46	52	37	17	4	0	...	...	...	...	...	...	...
13	...	...	...	...	...	...	...	...	...	...	...	9	6	0	6	10	21	33
14	...	...	...	...	4	24	30	25	18	−1	8	...	...	...	0	1	3	2
15	6	1	...	...	...	...	...	15	5	2	2	2	2	0	1	0	0	0
16	...	...	...	...	...	2	8	5	−1	1	0	3	2	−2	3	4	5	4
17	4	2	1	2	4	3	6	4	4	1	2	2	2	2	1	1	2	3
18	1	2	−3	1	5	8	10	7	2	4	8	8	4	3	4	4	4	10
19	18	24	21	22	18	26	30	16	11	8	8	2	4	4	4	6	7	12
20	28	32	28	28	31	34	36	26	10	5	10	...	...	...	...	...	...	...
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	5	8	12
23	14	13	12	13	15	17	18	13	11	4	3	−2	0	4	5	6	6	8
24	3	2	2	2	0	1	2	4	−4*	...	...	−6*	2	2	0	7	−3	−1
25	4	5	5	5	6	−3	−2	−2	0	0	...	0	0	0	1	1	2	3
26	6	5	6	6	7	10	11	8	6	2	...	...	...	...	...	...	...	...
27	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2	2	3	3
28	−2	1	2	1	2	4	4	4	3	3	2	12	3	2	2	4	5	7
29	8	7	7	7	7	7	7	−2	−2	0	0	−6	−3	1	10	10	10	4
30	—	—	1	4	7	17	17	16	7	3	2	2	1	−1	0	1	3	3
31											...							
平均 Mean	14.0	12.5	11.9	13.2	14.2	18.1	18.7	13.7	8.0	4.7	4.2	5.2	3.5	2.3	3.0	4.6	5.2	8.1

SEPTEMBER, 1897.

VERTICAL MAGNETIC INTENSITY.

P. M.					夜半	平均	最大		最小		較差	記事
7	8	9	10	11	M. N.	Mean	Maximum		Minimum		Range	Remarks
								h m		h m		
344	344	345	346	346	347	3440	355	4 00 a	313	8 45 a	.0³ 42	C
347	348	350	350	350	350	3469	356	1 35 p	337	8 00 a	19	C
336	337	341	337	338	340	3408	352	5 00 a	326	9 40 a	26	A
332	335	335	329	346	345	3363	351	1 42 a	324	5 12 p	27	C morning, A afternoon
329	336	341	343	341	342	3354	350	2 22 p	321	8 16 a	29	A
338	340	340	340	339	344	3385	348	1 42 p	325	10 00 a	23	A
332	335	335	333	333	339	3370	347	11 20 a	330	9 00 a	17	C
341	840	341	340	340	343	3401	346	0 25 p	329	8 50 a	17	C
332	334	332	334	335	339	3378	354	1 38 p	329	6 18 p	25	A
335	335	334	334	333	340	3370	345	2 00 p	325	10 00 a	20	C
329	336	334	334	331	333	3345	346	2 30 p	322	8 30 a	24	A morning, S° afternoon
335	335	335	337	335	340	3354	347	5 10 a	323	9 00 a	24	S° morning, C afternoon
327	332	332	332	331	335	3352	344	2 00 p	325	9 36 a	19	C
324	320	324	329	331	337	3306	338	1 00 p	318	9 30 a	20	C Early in morning, A
334	336	336	335	335	338	3379	352	1 04 p	325	9 00 a	27	C, A 9a-4p
335	335	335	336	336	339	3354	342	1 00 p	323	9 26 a	19	A
337	337	338	337	338	344	3402	345	3 00 p	337	9 00 a	8	A
334	335	338	337	337	342	3397	350	2 00 p	333	9 00 a	17	C
337	340	340	340	341	342	3407	348	2 00 p	336	9 00 a	12	C
337	339	339	339	339	343	3371	343	M. N.	328	9 40 a	15	C
337	337	335	337	343	345	3462	345	M. N.	335	11 00 a	10	C
338	339	338	337	337	342	3408	351	1 40 p	329	10 00 a	22	A
336	337	340	343	339	341	3374	345	4 12 a	328	9 46 a	17	A
347	345	345	345	345	351	3459	353	5 16 a	337	11 00 a	16	A
338	340	338	345	338	344	3470	359	1 00 a	337	9 32 a	22	C morning, A afternoon
345	345	349	346	348	349	3457	352	2 00 p	341	9 00 a	11	C
345	342	345	351	351	354	3485	354	M. N.	341	5 16 p	13	C
350	350	347	346	347	351	3501	357	2 28 a	338	9 07 a	19	C
347	349	353	351	351	354	3490	354	3 00 a	339	10 00 a	15	C
...	...	...	...	...	...	3532	...	...	...	...	...	A
3372	3384	3391	3394	3398	3432	3404	3493		3294		.0³ 198	

ATMOSPHERIC ELECTRICITY.

P. M.					夜半	平均	最大		最小		較差	記事
7	8	9	10	11	M. N.	Mean	Maximum		Minimum		Range	Remarks
								h m		h m		
12	14	12	13	13	12	11.2	43	6 45 a	1	4 40 p	42	-●°-3.15a≡°4.55a-8a ⋖7p-9p.
8	7	7	7	6	9	7.5	18	6 05 a	-72	3 00 p	90	●°7.30a-9.20a2.50p-5.15p T 1.50p-2.20p,3.30p
8	7	7	5	4	6	5.2	16	7 30 a	-2	2 30 p	18	≡°4.30a-7.40a
11	11	9	8	8	8	6.6	17	6 19 a	-17	1 22 p	34	⫽3p-4p ⋖6p-10p [4.15a-6a
12	11	6	14	15	14	11.6	...	...	...	...	...	●°1.25a - ● 1.40a-0.20p T 1a-2a ⋖ T °3.40a T ꓘ
...	4*	-86*	-59*	-14*	2*	14.7	31	6 47 a	-120	8 26 p	151	●2.30a-●₂7.30p-07.35p-
6	9	10	8	9	11	5.7	16	11 40 a	-40	5 07 a	56	-●°-●-●°-9.30a [ꓘ²-
...	...	...	...	...	...	...	...	...	...	...	...	●°-●-●²10.30a-M.N. ꓘ°2.12a- T 0.10p ⋖6.45p-ꓘ
9	13	9	10	10	13	6.0	...	...	...	...	...	-●²-●-●²-●-7.35a ⫽4a-7a
30	36	36	48	37	66	23.4	...	...	...	...	...	—
52	52	53	48	52	48	38.9	88	1 08 a	3	10 55 a	85	≡°0.30a-1.30a. ≡°4.05a-8a
...	...	...	...	...	...	35.3	...	...	...	...	...	●11.04a-11.30a
37	36	21	33	28	9	19.2	...	...	...	...	...	●8.50a-9.35a 0.40p-2.40p ●°7.57p-●²-●-°
2	0	2	4	7	7	8.0	190	2 00 a	-197	1 55 a	387	-●°-
0	0	0	1	...	...	2,2	109	6 05 a	-128	6 24 a	237	-●°-●-●°-11.40a●8.15p-, ꓘ3.30a-4.40a
9	8	6	6	7	6	4.0	49	0 13 a	-115	0 04 a	164	-●-●²0.20a-●1.35a-8a ●°2.05-3.10p
4	6	4	4	6	2	3.0	8	7 40 p	-2	10 00 a	10	●°4.40a-6.20a
17	15	22	23	26	25	8.7	32	7 28 p	-7	2 48 a	39	●1.25a-3.40a
20	27	27	34	34	28	17.1	38	10 07 p	1	2 46 p	37	≡°5.50a-7a
...	...	...	...	...	...	24.4	...	...	...	...	...	●°3.40a-5.10p ●°5.30p-●°5.30p-●10.45p-
...	...	...	...	...	...	...	...	...	...	...	...	-●°-●²1.15p-●1.25p-●°-2.35p
12	15	16	13	13	14	11.2	...	...	...	...	...	—
9	10	8	9	6	4	8.6	18	7 10 a	-6	0 28 p	24	≡°5.15a-7.15a
0	-1	0	2	5	5	1.7	7	3 22 p	-40	10 30 a	47	●°0.45a-2.35a ●°4.40a-●●°-8.30p
6	10	8	8	9	7	3.2	11	9 24 p	-4	6 06 a	15	≡°4.20a-5a ●°5.30a-9.30a ●°11.50a-1.25p
...	...	...	...	...	...	6.8	...	...	...	...	...	●°4.50p-●-●°-●
3	4	4	1	4	4	2.9	...	...	...	...	...	-●-●°-●²4.45a-●°-3.30p ●°8.55p-
8	10	10	11	11	10	5.0	12	1 22 a	-4	1 00 a	16	-●°-●-●°-9.40a
12	10	20	18	...	...	6.0	129	11 30 p	-132	11 42 p	261	●°4.20a-3.20p ●°-●-●²10.40p-●10.57p-
5	5	6	4	3	4	5.0	...	...	...	...	...	-●°-●²0.58a-●-3.20a ●°Noon-3.25p ⫽4a
12.2	13.1	12.6	13.8	14.2	14.2	10.5						

明治三十年十月

日	午前 A.M.											正午	午後					
Day.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2	3	4	5	6

偏角 4°W+

Day	1	2	3	4	5	6	7	8	9	10	11	Noon	1	2	3	4	5	6
1	...	...	...	...	...	...	...	...	...	...	...	35.6	36.0	35.6	34.1	33.2	32.7	33.0
2	30.4	30.4	30.4	30.7	31.9	32.2	30.9	31.2	30.9	...	...	34.3	34.7	34.4	35.6	32.8	33.2	32.1
3	29.4	29.7	29.7	29.9	31.9	31.8	31.3	31.2	30.6	32.1	33.4	33.4	34.1	33.5	33.5	32.1	31.8	29.4
4	30.4	30.4	30.6	30.3	31.2	30.7	39.9	29.0	28.8	29.4	30.6	33.4	34.6	34.4	33.4	32.8	32.1	31.5
5	30.9	31.1	30.8	30.8	31.8	31.5	30.8	31.2	30.8	32.1	34.3	35.0	35.2	33.6	32.1	31.2	31.2	31.3
6	31.1	31.1	30.9	30.9	31.1	31.1	30.9	30.6	30.8	31.3	33.0	34.9	33.7	32.7	31.9	30.9	30.9	31.2
7	30.8	31.1	30.6	30.6	30.6	30.9	30.6	30.5	30.3	31.3	32.8	33.8	33.7	32.8	31.9	31.2	30.9	31.5
8	31.2	30.9	30.9	30.9	30.8	30.9	30.6	29.7	29.1	30.5	32.2	33.7	34.1	33.6	32.4	31.5	31.5	31.9
9	30.9	30.9	30.8	30.9	30.8	30.9	30.5	29.4	29.3	30.8	32.8	34.0	34.1	33.6	31.5	30.6	30.9	31.3
10	30.8	30.8	30.6	30.5	30.2	30.2	29.4	29.4	30.2	31.9	33.4	33.6	33.0	32.1	31.2	30.9	30.9	32.1
11	31.3	30.3	30.3	30.0	30.0	30.8	30.6	31.2	32.5	33.6	35.3	35.2	34.6	33.1	31.8	31.5	31.5	31.5
12	30.6	30.6	30.8	30.8	30.9	30.9	30.6	30.6	30.6	31.1	32.2	32.8	32.7	32.2	31.9	31.8	31.5	31.1
13	80.8	30.0	30.3	32.7	31.5	30.8	31.1	30.2	30.6	31.6	32.2	32.8	32.7	32.1	31.5	31.5	31.1	31.2
14	30.6	30.6	30.6	30.5	30.2	30.6	29.6	29.9	30.8	32.1	32.4	32.5	32.1	32.1	31.9	31.9	31.1	30.9
15	30.0	29.6	29.7	29.6	29.6	30.3	30.5	30.6	30.6	30.8	31.1	32.1	31.8	31.5	30.8	30.3	29.7	30.5
16	30.2	29.9	29.6	29.6	29.9	30.6	30.8	30.8	30.8	32.2	32.4	33.1	32.2	31.8	31.5	30.9	30.8	30.9
17	30.6	30.5	30.8	29.7	29.4	30.5	30.0	29.3	29.3	30.8	32.4	32.5	32.4	31.6	30.9	32.1	30.6	30.8
18	29.3	30.5	29.4	30.3	29.7	29.9	29.9	30.8	30.8	31.3	32.2	...	33.4	32.2	31.1	30.8	30.8	30.3
19	30.6	30.2	30.6	30.9	30.3	30.9	32.1	30.9	30.3	30.9	32.1	32.8	33.0	31.5	30.6	30.6	30.8	30.8
20	30.8	30.8	30.9	30.8	30.8	30.6	29.3	29.1	29.1	30.0	32.2	32.7	33.4	32.4	31.1	30.8	30.9	31.1
21	30.8	30.8	30.8	30.6	30.8	30.6	29.4	29.3	29.4	30.8	32.4	32.7	32.5	32.2	30.9	30.8	30.8	30.8
22	30.6	30.6	30.6	30.6	30.5	30.5	29.9	29.0	29.3	30.6	31.8	32.4	31.6	30.8	30.0	29.6	30.2	30.5
23	30.0	30.0	...	...	...	...	30.0	29.4	30.0	30.8	31.8	31.9	31.3	30.6	29.3	29.3	30.8	32.1
24	30.8	30.6	30.6	30.5	30.5	30.6	30.0	28.1	29.3	30.3	31.8	32.5	32.1	30.6	29.6	30.5	30.5	30.8
25	30.5	30.9	30.0	29.7	30.0	30.6	30.6	30.5	30.8	31.5	31.6	32.2	32.1	31.5	30.9	30.6	30.3	30.8
26	30.6	30.6	30.6	30.0	30.0	30.0	29.6	29.3	29.4	30.6	30.8	31.1	31.1	30.9	31.1	31.2	31.5	31.5
27	30.6	30.8	30.6	30.6	31.1	30.8	29.6	28.1	28.6	29.4	31.6	32.1	32.2	31.8	31.1	30.8	30.8	30.9
28	30.0	29.1	29.3	28.9	29.3	29.3	29.3	29.1	30.9	31.6	33.3	33.7	33.8	31.6	30.8	30.0	30.8	30.8
29	30.9	30.8	30.9	30.0	30.9	31.2	29.7	29.1	30.5	30.9	32.1	32.4	32.2	31.3	30.9	31.1	31.8	30.9
30	31.8	31.2	31.2	31.5	32.1	31.1	29.3	29.4	30.0	30.6	32.8	32.7	32.7	32.5	32.5	30.9	30.9	30.6
31	30.9	31.1	30.6	30.8	30.8	31.8	30.9	30.0	29.4	30.6	32.1	32.7	32.5	32.4	32.7	30.8	30.6	30.8
平均 Mean.	30.57	30.53	30.17	30.47	30.64	30.78	30.29	29.90	30.13	31.09	32.38	33.15	33.08	32.35	31.63	31.13	31.09	31.13

水平磁力 0.29............+

Day	1	2	3	4	5	6	7	8	9	10	11	Noon	1	2	3	4	5	6
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	821	817	817	817	816	820	817	816	807	799	816	832	837	839	833	826	824	813
11	812	807	811	825	801	804	795	776	774	778	780	795	807	806	805	802	794	803
12	812	806	808	801	806	806	806	800	801	806	810	822	827	827	825	820	820	820
13	829	838	826	830	830	831	827	822	820	822	825	828	831	834	835	834	833	833
14	834	835	835	835	836	838	841	836	833	827	830	832	835	843	842	844	835	833
15	830	831	832	831	832	836	835	835	836	832	843	845	851	854	853	855	853	855
16	836	837	837	841	841	840	836	827	820	817	825	831	845	844	843	840	835	834
17	827	832	834	837	838	836	828	821	816	825	837	855	864	859	841	829	837	837
18	838	827	825	825	827	825	822	807	816	817	827	...	822	817	819	805	796	779
19	824	822	823	823	822	818	805	798	797	796	807	814	804	822	827	829	823	825
20	816	814	820	822	807	814	818	811	803	804	812	812	812	815	815	818	816	819
21	819	821	817	818	814	813	812	806	811	818	819	819	834	836	839	831	829	828
22	830	831	832	831	831	833	838	836	832	833	838	841	850	859	857	847	847	843
23	839	833	...	...	...	...	814	809	804	807	813	825	837	844	856	850	833	812
24	812	817	818	817	820	821	816	826	815	827	831	832	840	846	843	837	835	831
25	837	834	837	836	834	837	836	838	839	840	842	852	856	857	856	854	850	844
26	829	833	836	833	833	830	830	831	830	830	831	839	846	848	845	841	828	831
27	830	831	827	823	818	821	819	826	821	822	828	837	846	848	848	846	842	841
28	849	840	835	840	828	826	839	830	825	831	834	833	836	846	845	839	833	836
29	840	841	850	861	822	815	813	803	799	807	810	819	833	832	820	826	820	828
30	839	835	839	841	836	839	841	823	818	815	811	828	833	834	835	841	843	846
31	822	824	817	807	802	804	809	808	811	805	805	803	814	816	813	812	811	811
平均 Mean.	8284	8275	8274	8283	8235	8241	8226	8175	8149	8163	8215	8283	8345	8375	8361	8330	8290	8274

OCTOBER 1897.

MAGNETIC DECLINATION.

P. M. 7	8	9	10	11	夜半 M.N.	平均 Mean	最大 Maximum		最小 Minimum		較差 Range	記事 Remarks.
′	′	′	′	′	′	′	′	h m	′	h m	′	
31.8	32.1	31.8	31.8	31.6	30.4	33.05	...	...	...	...	...	A
31.9	31.9	31.9	32.2	30.9	30.3	32.05	35.6	3 00 p	30.3	M.N.	5.3	A
31.8	29.9	30.9	31.2	31.2	30.4	31.42	34.6	1 15 p	29.0	2 45 a	5.6	A
31.5	31.6	31.6	31.8	31.8	31.5	31.39	34.7	1 10 p	28.8	9 00 a	5.9	C
31.3	31.6	31.8	31.5	31.5	31.1	31.81	35.2	1 00 p	30.5	7 20 a	4.7	C
31.2	31.2	31.5	30.8	30.9	30.9	31.48	34.9	Noon	30.6	8 00 a	4.3	C
31.9	32.1	31.9	31.5	31.5	31.2	31.50	33.8	Noon	30.3	9 00 a	3.5	C
31.8	31.5	30.8	31.1	31.1	30.9	31.40	34.4	0 50 p	29.1	9 00 a	5.3	C
31.3	31.1	31.1	30.9	30.9	30.8	31.25	34.1	1 00 p	29.3	9 00 a	4.8	C
32.2	31.8	31.5	31.3	30.8	30.8	31.23	33.6	Noon	28.0	8 20 a	5.6	C
31.5	31.5	31.6	31.6	31.5	31.1	31.83	35.3	11 00 a	29.6	4 20 a	5.7	A morning, C afternoon
31.1	31.3	31.2	30.6	30.8	30.8	31.23	32.8	Noon	30.5	7 15 a	2.3	C
31.2	31.5	31.1	31.3	31.1	30.9	31.32	32.8	Noon	29.6	2 15 a	3.2	A Early in morning, C
31.1	31.2	31.1	30.8	30.6	30.5	31.07	32.5	Noon	29.6	7 00 a	2.9	C
31.1	32.1	31.8	30.8	30.8	30.6	30.68	32.5	7 55 p	29.6	5 00 a	2.9	C morning, A afternoon
30.9	31.1	31.2	30.6	30.8	30.6	30.97	33.1	Noon	29.6	3 00 a	3.5	C
30.9	31.1	31.1	30.8	30.3	30.0	30.77	32.5	Noon	28.9	5 00 a	3.6	A
31.3	30.6	30.8	38.1	30.3	30.6	30.63	33.7	0 45 p	28.1	10 00 p	5.6	A morning, S° afternoon
30.6	29.1	31.5	30.9	30.6	30.6	30.97	33.3	0 50 p	28.9	8 15 p	4.4	C
30.9	30.9	31.1	30.9	30.8	30.9	30.93	33.4	1 00 p	29.1	8 00 a	4.3	A
30.8	30.6	30.8	30.8	30.9	30.8	30.88	32.8	11 50 a	29.3	8 00 a	3.5	C
30.6	30.9	30.8	30.8	30.8	39.9	30.95	32.4	Noon	29.0	8 00 a	3.4	C
32.4	32.2	31.6	30.8	30.6	30.6	30.77	32.5	7 20 p	29.3	4 00 p	3.2	C
30.8	30.8	30.9	30.8	30.9	30.6	30.60	32.5	Noon	27.8	7 37 a	4.7	A morning, C afternoon
30.8	31.2	31.2	30.6	30.6	30.6	30.42	32.4	11 50 a	29.3	2 32 a	3.1	C
31.3	31.5	31.2	31.2	30.8	30.8	30.70	31.8	0 30 p	29.3	8 00 a	2.5	C
30.9	31.1	30.9	29.6	30.6	30.5	30.63	32.2	1 00 p	28.1	8 00 a	4.1	C, A late at night
31.1	30.9	32.1	30.6	31.1	31.3	30.78	34.4	11 45 a	28.0	7 55 a	6.4	A
30.0	30.0	30.6	31.1	31.2	31.5	30.92	32.4	Noon	29.1	8 00 a	3.3	A
30.8	31.3	30.8	31.5	31.3	31.1	31.27	33.6	0 50 p	29.0	7 30 a	4.6	A
30.9	30.9	30.9	30.8	30.9	30.8	31.11	32.7	Noon	29.4	9 00 a	3.3	C
31.22	31.18	31.26	30.94	30.95	30.75	31.14	33.42		29.23		4.18	

HORIZONTAL MAGNETIC INTENSITY.

P. M. 7	8	9	10	11	夜半 M.N.	平均 Mean	最大 Maximum		最小 Minimum		較差 Range	記事 Remarks.
								h m		h m		
...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...
807	810	809	816	812	808	8179	839	2 00 p	807	7 00 p	32	A
809	808	811	812	811	804	8012	825	4 00 p	765	10 15 a	60	A morning, C afternoon
822	817	820	833	827	830	8155	833	10 00 p	800	8 00 a	33	C
830	831	832	834	832	835	8301	835	M.N.	820	9 00 a	15	A Early in morning, C
835	832	830	832	830	832	8348	844	4 00 p	827	10 00 a	17	C
846	821	827	832	838	840	8393	855	4 00 p	821	8 00 a	34	C morning, A afternoon
832	827	828	833	828	830	8336	845	1 00 p	817	10 00 a	28	C
833	833	828	830	825	831	8347	864	1 00 p	816	9 00 a	48	C morning, A afternoon
777	792	793	824	817	812	3134	848	0 40 a	777	7 00 a	71	A morning, S° afternoon
814	805	806	811	818	819	8147	829	4 00 p	796	10 00 a	33	S°
818	817	817	823	820	818	8150	822	4 00 a	803	9 00 a	19	A morning, C afternoon
830	831	832	832	828	828	8235	839	3 00 p	806	8 00 a	33	C
842	841	841	841	840	845	8400	859	2 00 p	828	0 00 a	31	C
792	797	800	811	817	815	8204	861	2 25 p	792	7 00 p	69	S°
831	831	830	834	834	839	8285	846	2 00 p	812	1 00 a	34	A
835	825	821	823	826	823	8388	857	2 00 p	821	9 00 p	36	C
836	834	837	834	842	831	8349	851	1 37 p	828	5 00 p	23	C
843	844	845	855	849	849	8358	855	10 00 p	818	5 00 a	37	C, A late at night
833	836	823	853	839	844	8364	846	2 00 p	821	8 45 a	25	S°
831	831	837	836	843	836	8272	861	4 00 p	799	9 00 a	62	S Early in morning, S°
839	833	843	827	825	823	8328	846	6 00 p	805	10 45 a	41	S°
810	813	805	813	811	810	8107	824	2 00 a	802	5 00 a	22	C
8248	8231	8234	8290	8278	8274	8264	8447		8082		365	

明治三十年十月

日	午前 A. M.											正午	午後					
Day.	1	2	3	4	5	6	7	8	9	10	11	Noon	1	2	3	4	5	6

鉛直磁力　　0.34...........+

Day	1	2	3	4	5	6	7	8	9	10	11	Noon	1	2	3	4	5	6
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	333	330	334	335	323	332	326	318	315	311	313	324	323	325	319	316	316	325
12	332	328	330	327	330	333	334	329	328	325	327	335	333	333	333	330	337	337
13	345	351	357	349	347	349	348	343	340	345	353	353	352	357	356	352	351	351
14	348	349	349	352	353	359	361	359	356	353	353	355	352	356	355	354	352	350
15	348	346	345	345	346	348	348	347	344	339	339	341	341	344	340	345	344	348
16	350	348	350	352	353	352	351	350	347	345	349	350	357	356	357	355	357	357
17	348	350	348	347	348	349	343	340	339	342	347	360	365	366	357	352	356	360
18	347	340	340	339	340	340	338	334	338	336	339	...	340	339	349	336	337	337
19	356	354	353	352	345	340	337	332	325	324	332	340	340	351	355	353	350	353
20	339	337	341	341	324	341	348	347	341	332	328	335	339	346	346	348	347	356
21	352	355	351	349	342	340	341	335	336	332	328	337	348	353	356	352	351	351
22	359	360	362	358	355	357	358	354	344	348	350	357	364	369	363	362	362	363
23	...	...	...	...	...	...	341	337	334	328	332	339	343	347	350	345	341	338
24	349	348	348	347	351	351	351	352	346	347	353	349	357	367	362	359	361	361
25	367	367	365	366	362	363	362	364	362	363	357	360	365	372	374	374	375	372
26	372	372	372	370	364	361	358	357	355	350	357	361	366	370	369	371	369	370
27	373	374	370	364	360	361	360	360	347	344	345	354	360	364	369	372	374	276
28	373	371	365	357	357	356	359	352	348	349	346	344	353	368	372	369	373	376
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
31	392	389	384	378	375	367	376	364	359	353	352	359	364	363	360	358	357	356
平均 Mean	3546	3538	3536	3516	3486	3499	3495	3460	3423	3403	3421	3474	5306	3551	3541	3528	3532	3546

空中電氣

Day	1	2	3	4	5	6	7	8	9	10	11	Noon	1	2	3	4	5	6
1	4*	2*	3*	5*	7*	8*	8*	5*	4*	2*	2*	...	...	...	...	...	...	...
2	35	27	35	29	43	60	60	42	21	11	8	5	7	11	11	11	15	20
3	56	64	75	66	71	78	98	113	56	82	25	15	20	10	14	14	25	42
4	71	60	67	51	53	61	60	42	27	30	22	18	12	13	15	17	25	41
5	54*	53*	49*	53*	58*	73*	±	+	+	—	—	—	—	—	—	—	—	—
6	15	21	13	8	18	38	33	22	5	11	8	5	12	11	15	11	17	11
7	17	18	20	22	26	32	32	22	19	15	11	11	11	7	7	5	9	12
8	10	4	8	8	15	15	9	—	—	—	—	—	-37*	-18*	-10*	3	5	8
9	15	14	20	18	24	25	30	23	18	18	18	8	15	9	8	9	16	19
10	30	28	29	36	42	60	48	32	22	9	10	3	12	15	10	18	24	42
11	54	56	57	65	72	84	106	86	56	45	31	22	20	16	-4	-8	4	35
12	61	51	44	45	76	88	86	74	45	36	27	33	28	22	11	22	16	3
13	24	24	22	33	25	17	18	20	21	14	9	9	21	20	16	17	18	10
14	19	16	20	22	49	87	144	106	74	36	25	22	36	29	27	29	46	48
15	47	43	45	70	124	141	178	111	60	50	58	52	...	54	99	114	100	82
16	163	80	33	91	75	101	106	84	73	45	34	23	16	41	56	61	76	100
17	72	72	60	50	77	126	159	84	39	20	18	16	13	10	2	10	37	63
18	97	90	83	78	94	107	102	99	62	37	26	15	27	13	14	37	35	85
19	71	69	86	108	93	150	134	100	46	21	12	5	—	0	14	24	62	100
20	85	116	157	132	139	176	168	114	93	62	61	53	53	67	63	49	72	89
21	93	84	79	107	112	158	183	137	73	44	35	29	2	15	8	25	35	55
22	74	62	60	66	93	79	129	107	106	45	23	22	42	27	0	25	40	84
23	37*	+	+	±	—	—	—	—	—	—	—	—	—	—	—	—	—	—
24	20	20	18	20	44	86	148	157	100	50	...	...	...	...	50	48	71	56
25	35	29	28	30	42	72	75	60	59	36	37	27	31	62	46	29	48	57
26	47	36	37	39	66	98	120	61	36	41	30	19	32	33	38	45	69	...
27	87	79	84	83	99	88	75	81	81	52	52	58	74	39	44	44	68	93
28	86	85	94	81	107	125	150	117	112	114	102	70	72	62	66	88	91	86
29	96	133	142	136	121	136	156	117	83	79	58	40	34	26	34	45	34	55
30	115	112	87	142	168	158	172	165	81	87	66	54	54	56	41	31	45	41
31	—	—	—	0*	42	72	83	78	—	—	—	—	-6*	0*	±	37	55	107
平均 Mean	56.9	55.3	57.5	60.6	71.8	89.9	102.2	83.5	56.8	39.8	32.2	25.4	28.0	26.7	27.1	30.7	41.4	53.5

OCTOBER, 1897.

VERTICAL MAGNETIC INTENSITY.

P. M. 7	8	9	10	11	夜半 M. N.	平均 Mean	最大 Maximum	h m	最小 Minimum	h m	較差 Range	記事 Remarks
...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...
332	333	334	334	331	323	3252	335	4 00 a	311	10 00 a	24	A morning, C afternoon
341	340	343	349	347	346	3345	349	10 00 p	325	10 00 a	24	C, A late at night
349	349	351	351	351	351	3500	358	1 20 p	340	9 00 a	18	A morning, C afternoon
352	349	347	349	347	347	3524	361	7 00 a	347	11 00 p	14	C
348	339	346	350	352	352	3452	353	11 20 p	337	10 15 a	16	C morning, A afternoon
357	355	356	358	351	350	3526	358	10 00 p	345	10 00 a	13	C
358	357	355	355	349	347	3516	366	2 00 p	339	9 00 a	27	A
341	347	347	355	354	351	3415	360	10 15 p	334	8 00 a	36	A
348	345	345	347	346	341	3443	356	1 00 a	324	10 00 a	32	A
356	355	356	359	356	353	3446	359	1 000 p	328	5 00 a	31	A morning, C afternoon
351	352	356	356	357	354	3473	358	10 45 p	328	11 00 a	30	C
363	363	366	367	367	365	3598	369	2 00 p	344	9 00 a	25	C
337	341	345	351	352	350	3417	...	...	...	...	...	C
365	368	364	365	366	365	3563	368	8 00 p	346	9 00 a	22	A
366	362	362	364	369	366	3658	377	5 20 p	357	11 00 a	20	C
372	372	377	373	379	369	3669	379	11 00 p	350	10 00 a	29	C
378	379	378	378	375	371	3661	379	8 00 p	344	10 00 a	35	A morning, C afternoon
375	377	875	...	...	...	3626	...	m n	...	11 00 a	...	A, S° late at night
...	...	...	...	...	...	...	...	10 50 p	...	9 40 a	...	S°
...	...	...	...	...	...	...	...	4 00 a	...	11 00 a	...	S°
351	352	348	351	349	345	3626	392	1 00 a	345	M. N.	47	A morning, C afternoon
3547	3545	3553	3562	3554	3526	3512	3634		3379		255	

ATMOSPHERIC ELECTRICITY.

P. M. 7	8	9	10	11	夜半 M. N.	平均 Mean	最大 Maximum	h m	最小 Minimum	h m	較差 Range	記事 Remarks
...	...	...	...	48	32	...	...	...	...	...	...	
46	52	49	57	58	66	32.5	72	6 30 a	3	1 20 p	69	
46	69	60	108	92	73	54.9	>146	10 37 p	5	2 27 p	>141	—
56	63	66	65	54	57	44.0	83	3 00 a	9	0 50 p	74	≡°5.10a–8a <7p <°8p <10p
	10*	8*	7*	15*	15*	...	94	8 35 a	<–119	11a–7 p	>213	●°6.45a–8a ●°8.30a–●–●°–
19	16	4*	5*	11*	--	15.4	43	6 00 a	–32	M. N.	75	–●°–7.20a ●°8.30a–1.40p ●°2.25p–6p ●°7.40p–
15	13	17	8	8	8	15.2	36	6 40 p	–32	0 00 a	68	–●°–1.10a [●°9.15p–
12	22	29	27	30	34	14.6	44	11 35 p	–86	11 00 a	130	●°1.45a–3.35a ●°4.40a–●–●°–5.10p ≡°9p–M.N.
25	28	33	34	32	31	20.4	38	9 40 p	6	2 40 p	32	— [<°9p.10p
57	81	72	55	41	43	34.1	98	8 00 p	4	11 45 a	94	—
47	54	55	51	50	46	45.8	114	7 10 a	–11	3 30 p	125	--
6	10	5	0	8	10	33.6	108	5 55 a	–39	6 15 p	147	●°10a–10.05a ●°3.55p–●5.30p–●°–10p–M.N.
3	7	9	10	10	17	16.4	46	4 20 a	1	7 25 p	45	●5.20a–●°6.20a–8.05a
81	93	113	96	78	57	56.4	154	6 15 a	12	2 00 a	142	—
121	94	112	129	127	106	92.0	>171	6 10 a	39	2 25 a	>132	
109	94	119	92	80	52	74.7	>176	8 40 p	0	1 27 p	>176	..
84	106	107	119	122	109	65.6	177	6 55 a	–24	2 50 p	201	.
105	102	120	147	119	4	73.7	155	10 10 p	3	1 50 p	152	.
95	91	79	83	71	68	68.8	179	6 40 a	–67	0 45 p	246	--
124	180	125	139	151	116	107.7	>185	10 55 p	37	2 14 p	>148	< 11p.–
84	89	93	90	117	105	77.2	>198	7 15 a	–11	1 00 p	>209	<–1a
94	98	84	19	25	55	60.8	146	6 37 a	–9	3 15 p	155	—
	±					...	...	...	...	...	...	●°1.05a–●3.20a–●°7.25p–●8 45p–
55	36	32	21	21	18	53.6	177	7 37 a	12	2 10 a	165	–●–●°0.10a 3.40a
52	48	45	49	51	45	45.5	97	2 40 p	15	0 15 p	82	.
...	...	...	...	...	80	51.5	...	...	...	...	...	.
106	87	115	99	77	76	76.7	134	8 17 p	22	2 42 p	112	.
130	123	94	107	93	88	97.6	163	6 40 a	58	1 40 p	105	
62	53	62	81	100	91	82.2	166	6 37 a	18	1 30 p	148	—
28	0	—	—	—	—	89.6	>198	4 30 a	<–125	...	>323	≡²3.30a–≡°3.05a–7.50a ⚡10p–
99	85	85	69	68	68	72.9	134	6 15 p	<–127	..	>261	–⚡–4a ⚡2p
65.3	69.0	71.2	70.2	67.3	60.8	56.1						

明治三十年十一月

偏角 4°W+

日	午前			A. M.							正午	午後					
Day	1	2	3	4	5	6	7	8	9	10	11	Noon	1	2	3	4	5	6
1	30.9	30.7	30.7	30.9	30.9	31.0	31.0	29.7	29.2	30.1	30.9	32.2	32.3	32.2	31.6	30.1	31.0	37.2
2	31.0	30.9	31.2	31.4	30.4	30.7	31.9	30.9	31.6	32.2	32.9	33.1	32.2	31.3	30.7	30.6	31.0	31.4
3	31.4	30.8	30.5	31.1	30.1	30.7	30.5	31.0	31.5	32.7	33.9	33.6	32.9	32.1	31.4	31.1	31.7	31.7
4	31.0	31.0	31.0	31.0	30.7	30.4	39.1	29.5	30.2	31.5	32.3	32.6	32.3	31.7	31.5	31.1	31.1	31.1
5	31.5	30.9	30.6	30.7	30.2	30.2	39.3	29.3	30.9	31.4	32.1	32.5	32.4	31.9	31.5	31.8	31.6	32.1
6	31.4	31.2	20.9	20.6	30.6	31.4	30.8	30.3	30.0	30.8	31.8	32.5	33.4	33.0	32.7	30.8	32.1	31.6
7	30.9	31.2	31.3	31.0	31.9	32.0	31.2	30.7	30.7	31.2	31.9	32.5	32.3	31.6	30.7	30.4	31.0	31.5
8	31.3	31.1	31.1	30.7	31.1	31.3	30.7	30.2	30.5	31.1	32.3	32.4	32.3	31.7	31.3	30.8	31.3	31.4
9	31.4	31.3	31.0	31.3	31.3	31.3	30.2	29.8	30.5	30.8	32.0	33.2	32.6	32.0	31.3	31.8	31.7	32.1
10	31.8	31.1	31.1	31.7	30.9	31.9	30.6	20.2	30.9	31.2	32.4	32.8	33.0	32.1	31.4	31.4	31.1	31.5
11	31.4	31.2	31.4	31.2	31.1	30.8	29.9	29.3	39.7	31.4	33.3	34.3	33.6	33.6	32.2	31.4	31.7	31.5
12	31.5	31.5	31.2	31.8	31.5	31.5	30.9	29.8	39.6	30.7	31.6	32.3	32.9	32.9	32.8	31.8	31.8	31.8
13	31.6	31.9	31.9	32.0	32.2	32.2	32.2	30.7	30.6	30.9	31.6	32.3	33.2	33.1	32.2	31.5	31.6	31.8
14	31.3	31.1	31.1	30.7	31.4	31.3	32.3	31.4	31.0	31.6	32.4	33.0	32.9	32.3	32.3	32.4	32.0	32.1
15	32.3	32.9	31.6	31.6	32.0	31.4	31.4	31.0	31.4	32.3	33.6	33.6	33.0	32.9	31.4	31.0	32.3	31.4
16	32.5	31.8	31.8	31.8	31.7	31.7	31.2	30.6	30.9	32.2	33.1	33.6	33.1	33.0	32.0	31.4	31.4	31.5
17	32.1	31.7	31.7	31.4	31.2	31.5	31.1	30.9	31.1	31.7	32.4	33.6	33.7	33.7	33.7	32.5	32.7	33.3
18	31.5	30.9	30.9	31.5	31.8	32.6	32.9	32.6	32.3	33.5	34.1	34.4	33.2	32.8	32.2	31.6	31.8	32.1
19	31.6	31.5	32.3	31.3	31.6	33.4	32.5	32.6	32.9	33.8	33.4	33.2	32.9	32.5	31.9	32.1	32.2	32.5
20	32.2	32.2	32.0	32.0	32.2	32.4	32.3	32.3	31.1	30.7	31.1	32.0	32.6	32.6	32.3	31.9	31.9	31.7
21	31.2	31.1	31.2	31.5	32.8	32.0	33.1	33.9	32.7	33.0	33.3	33.3	32.8	32.7	32.4	32.0	31.8	31.7
22	32.3	32.1	32.5	32.1	31.8	31.8	31.8	31.5	31.7	31.8	32.3	32.8	33.1	33.1	32.8	32.7	32.0	32.5
23	32.1	32.1	32.2	32.5	32.5	32.2	32.2	31.6	31.5	32.1	33.1	34.0	33.4	32.9	32.4	31.9	31.9	32.1
24	31.6	31.5	31.5	30.9	31.6	32.2	32.6	31.8	31.3	31.3	32.1	33.5	32.9	33.1	32.5	32.2	32.1	31.8
25	31.3	31.6	31.1	31.6	32.9	33.2	35.2	34.5	33.2	32.9	33.0	32.7	33.3	31.9	32.2	31.4	32.2	32.3
26	31.4	31.9	31.7	33.2	32.3	32.9	33.6	33.6	32.9	32.9	32.5	32.6	32.7	32.6	32.6	32.2	32.2	32.0
27	31.5	32.0	31.8	32.1	32.4	32.0	32.4	32.3	32.3	32.6	32.8	33.3	33.7	33.1	32.4	32.3	31.5	33.6
28	32.3	31.5	31.5	31.8	31.8	32.0	32.3	31.7	31.1	32.1	32.6	34.5	34.5	33.1	32.6	32.1	32.3	32.1
29	32.2	32.4	32.1	32.1	32.4	32.2	32.5	31.6	31.8	31.5	31.9	32.7	33.2	33.2	32.5	31.9	32.1	32.1
30	31.9	32.1	31.9	32.4	32.9	31.9	32.8	32.4	31.8	32.1	33.1	33.7	34.4	33.5	33.1	32.1	31.8	32.0
31																		
平均 Mean	31.61	31.51	31.43	31.53	31.64	31.74	31.68	31.26	31.23	31.80	32.53	33.09	33.03	32.61	33.09	31.61	31.76	31.79

水平磁力 0.29............+

日	午前			A. M.							正午	午後					
Day	1	2	3	4	5	6	7	8	9	10	11	Noon	1	2	3	4	5	6
1	832	830	827	830	828	826	829	828	832	831	832	834	842	847	848	847	849	838
2	828	830	825	815	818	812	817	817	811	808	814	823	834	841	838	836	831	823
3	812	820	818	825	826	824	818	808	802	813	815	823	831	832	833	829	824	823
4	830	827	827	828	829	828	821	814	814	814	827	837	845	848	845	844	839	842
5	834	837	839	836	851	845	840	832	827	826	826	833	838	842	848	843	840	834
6	832	831	827	836	825	829	833	825	820	816	813	815	822	819	823	811	802	802
7	818	817	821	821	824	824	831	331	831	827	829	831	837	840	835	831	823	824
8	826	824	823	825	823	829	828	823	919	821	828	835	834	838	837	829	825	823
9	830	830	829	829	828	829	828	818	815	817	822	830	829	828	833	830	826	824
10	825	828	824	826	828	822	822	812	805	802	803	808	814	825	832	830	829	824
11	819	820	821	820	827	829	832	836	855	833	841	833	843	843	836	833	829	828
12	829	827	824	826	827	829	834	833	828	824	823	827	827	827	825	833	832	830
13	819	822	825	825	825	828	830	825	821	822	824	831	834	838	838	832	827	824
14	825	828	827	827	821	827	832	840	832	827	831	833	839	844	834	813	797	791
15	808	819	820	817	815	817	814	819	817	815	811	813	815	817	808	799	791	791
16	825	821	820	819	820	820	817	812	809	809	810	818	825	826	826	825	821	822
17	819	820	819	822	822	823	820	815	813	811	812	815	824	824	806	801	797	895
18	786	808	803	806	817	799	813	803	804	789	801	805	811	815	808	818	815	815
19	812	808	821	812	809	815	811	806	799	791	797	796	806	810	814	810	806	806
20	804	802	805	805	806	808	809	809	807	809	808	812	814	818	822	822	818	820
21	786	783	783	792	805	802	802	802	803	799	802	807	809	809	809	810	807	805
22	810	807	812	814	814	813	816	807	804	799	806	803	801	802	801	799	806	807
23	802	800	802	804	804	809	811	812	811	811	812	811	810	808	806	809	808	808
24	816	811	813	822	817	825	828	830	831	825	825	827	826	822	819	822	827	826
25	804	818	819	798	800	800	798	815	818	818	812	807	810	807	813	815	809	804
26	800	795	794	798	799	797	803	809	806	807	816	811	805	808	812	812	808	806
27	806	801	806	801	812	809	804	806	802	802	807	...	815	814	811	814	809	808
28	803	806	806	808	807	804	801	802	798	788	788	796	800	811	813	813	804	809
29	800	800	802	803	800	801	805	805	795	798	796	798	804	809	814	813	808	808
30	812	808	810	804	811	804	803	807	805	804	898	802	800	805	808	799	810	807
平均 mean	8151	8159	8164	8165	8179	8176	8183	8167	8138	8119	8143	8177	8215	8239	8232	8207	8172	8156

NOVEMBER, 1897.

MAGNETIC DECLINATION.

P. M. 7	8	9	10	11	夜半 M. N.	平均 Mean	最大 Maximum	h m	最小 Minimum	h m	較差 Range	記事 Remarks
31.3	31.7	31.0	31.2	31.4	31.4	30.86	32.5	1 35 p	27.2	6 00 p	5.3	C morning, A afternoon
31.9	31.6	31.4	31.6	31.6	31.6	31.46	33.1	noon	29.8	5 28 a	3.3	A
31.4	31.3	31.5	31.7	31.1	31.3	31.54	34.0	11 07 a	30.1	7 26 a	3.9	C
31.4	31.4	31.3	31.0	31.3	31.3	31.12	32.6	noon	29.1	7 00 a	3.5	C oa–8p, A 8p–M.N.
31.8	31.8	31 8	31.9	31.5	31.5	31.30	32.5	noon	29.3	8 00 a	3.2	A
31.2	30.9	30.8	30.9	30.9	31.2	31.32	33.6	1 05 p	30.0	9 00 a	3.6	A
30.7	31.7	31.7	31.9	31.7	30.7	31.35	32.5	noon	30.4	8 32 a	2.1	C
31.7	32.0	32.0	31.7	31.6	31.4	31.37	32.4	noon	29.9	8 25 a	2.5	C morning, A afternoon
31.4	31.6	31.7	31.3	30.7	31.7	31.42	33.2	noon	29.8	8 00 a	2.4	C
31.4	32.1	31.8	31.7	31.7	31.1	31.54	33.0	1 00 p	30.0	7 52 a	3.0	C
31.8	31.7	31.7	31.7	31.4	30.8	31.59	34.3	noon	28.9	7 44 a	5.4	C
31.9	31.9	31.9	30.7	31.5	31.5	31.55	33.1	1 42 p	29.6	9 00 a	3.5	C
31.9	32.0	31.5	31.5	31.2	31.5	31.80	33.5	1 30 p	30.6	9 00 a	2.9	C
32.0	32.0	32.3	32.1	31.3	31.1	31.81	33.6	0 15 p	30.2	7 12 p	3.4	C morning, S° afternoon
31.6	31.6	31.6	32.3	32.1	32,3	32.02	33,8	11 25 a	30.8	3 48 a	3.0	A
32.0	32.4	32.1	32.4	31.8	32.2	32.01	33.7	0 45 p	30.6	8 00 a	3.1	C oa–7p, A 7p–M.N.
33.7	33.6	33.6	32.2	31.7	30.9	32.36	34.0	7 16 p	30.9	8 00 a	3.1	C morning, S° afternoon
32.1	32.3	32.2	32.2	32.3	32.2	32.33	34.4	noon	30.3	2 21 a	4.1	S° morning, A afternoon
32.2	32.5	32.2	32.1	32.1	32.1	32.39	33.8	10 00 a	31.0	4 33 a	2.8	A morning, C afternoon
31.9	32.4	32.4	32.4	31.7	31.6	32.00	32.6	1 00 p	30.7	10 00 a	1.9	C
32.3	32,1	32.4	32.0	32.1	31.8	32.30	33.3	noon	30.5	1 21 a	2.8	A morning, C afternoon
32.5	32.5	32.1	32.1	32.0	32.3	32.26	33.4	1 12 p	31.2	9 24 a	2.2	C
32.2	32.4	32.1	32.1	31.9	31.9	32.30	34.0	noon	31.5	9 00 a	2.5	C
31.6	31.3	31.3	31.6	30.4	30.6	31.80	33.5	noon	30.0	11 18 p	3.5	A
31.9	32.5	32.2	32.2	30.7	30.8	32.37	**35.2**	7 00 a	30.1	3 12 a	5.1	A
32.2	33.0	32.5	32.5	31.9	31.7	32.48	33.9	7 36 a	30.8	0 03 a	3.1	A
32.8	31.1	32.3	33.0	32.3	32.3	32.41	33.7	1 00 p	31.1	8 00 p	2.6	A
32.3	32.3	32.3	32.3	32.3	31.8	32.30	34.8	0 12 p	31.1	9 00 a	3.7	C
32.1	31.9	32.4	32.5	31.6	32.1	32.21	33:5	1 24 p	31.3	8 24 a	2.2	C
32.2	32.4	32.5	32.4	31.9	32.1	32.48	34.4	1 00 p	31.6	9 33 a	2.8	C
31.91	32.00	31.95	31.91	31.59	31.56	31.87	33.53		30.28		3.25	

HORIZONTAL MAGNETIC INTENSITY.

P. M. 7	8	9	10	11	夜半 M. N.	平均 Mean	最大 Maximum	h m	最小 Minimum	h m	較差 Range	記事 Remarks
835	830	837	837	835	834	8349	848	3 00 p	824	5 45 p	.0³24	C morning, A afternoon
822	827	829	822	818	816	8231	845	1 00 p	808	10 00 a	37	A
823	827	826	828	829	828	8224	833	3 00 p	802	9 00 a	31	C
839	841	844	848	842	836	8337	848	2 00 p	814	8 00 a	34	C oa–8.p, A 8.p–M.N.
833	832	836	839	842	836	8370	**851**	5 00 a	823	10 13 a	28	A
794	896	802	807	816	816	8172	836	4 00 a	793	6 52 p	43	A
828	825	821	820	819	835	8268	840	2 00 p	817	2 00 a	23	C
820	822	823	824	824	824	8261	838	2 00 p	819	9 00 a	19	C morning, A afternoon
830	836	834	832	841	827	8281	841	11 00 p	815	9 00 a	26	A
822	818	821	819	815	830	8202	834	3 52 p	798	10 30 a	36	C
827	831	830	829	828	833	8307	846	2 06 p	819	1 00 a	27	A
830	830	830	840	830	829	8289	840	10 00 p	823	3 50 a	17	C
825	825	829	826	826	825	8269	838	3 00 p	819	1 00 a	19	C
792	804	815	812	813	827	8221	847	1 49 p	787	6 25 p	60	C morning, S° afternoon
795	805	810	810	816	812	8106	820	3 00 a	788	6 12 p	32	A
815	814	821	817	824	820	8190	828	3 08 p	808	9 35 a	20	C o.a–7.p, A 7.p–M. N.
785	785	777	788	794	804	8080	827	1 10 p	770	11 45 p	57	C morning, S° afternoon
814	814	813	811	808	811	8078	821	3 46 p	**768**	0 30 a	53	S• morning, A afternoon
805	806	805	805	807	806	8068	826	2 45 a	790	9 42 a	36	A morning, C afternoon
817	814	812	806	808	793	8103	823	3 05 p	793	M. N.	30	C
808	811	811	812	812	812	8034	816	10 35 p	778	1 34 a	38	A morning, C afternoon
804	801	801	804	802	803	8057	816	7 00 a	798	3 55 p	18	C
803	802	805	805	805	821	8075	821	M. N.	800	2 00 a	21	C
828	837	829	815	819	802	8226	839	8 12 p	797	11 50 p	42	A
809	807	807	812	817	805	8092	834	11 24 p	798	4 00 a	36	A
808	797	802	806	811	808	8049	816	11 00 a	794	1 30 a	22	A
810	812	807	801	803	811	8074	815	1 00 p	797	4 18 a	18	A
804	808	807	803	801	808	8037	815	2 20 p	784	10 22 a	31	C
809	810	808	803	810	814	8047	814	3 00 p	795	9 00 a	19	C
806	805	804	803	801	797	8047	812	1 00 a	797	M. N.	15	C
8147	8157	8165	8161	8172	8174	8171	8309		8005		.0³305	

明治三十年十一月

鉛直磁力 0.34..........+

日	午前					A. M.						正午	午後					
Day	1	2	3	4	5	6	7	8	9	10	11	Noon	1	2	3	4	5	6
1	332	323	319	318	315	312	314	306	312	311	303	308	317	329	338	340	345	339
2	335	334	331	326	322	320	322	321	313	323	323	338	342	344	340	338	336	334
3	331	335	332	334	331	333	333	331	324	335	342	319	347	343	342	337	335	337
4	332	330	330	330	330	334	331	325	322	319	325	328	328	332	329	327	327	328
5	320	323	323	320	328	324	321	313	312	314	313	318	324	326	329	328	328	326
6	326	324	322	328	323	328	331	326	320	318	316	316	324	326	331	326	326	326
7	331	330	330	329	330	329	330	326	321	314	314	320	326	332	332	330	332	335
8	336	333	334	334	333	337	335	327	327	327	327	329	329	335	335	332	333	334
9	337	337	334	335	335	339	337	335	323	321	324	331	332	338	343	343	344	346
10	340	339	338	338	336	336	334	331	330	329	343	335	336	342	345	343	340	340
11	332	332	334	332	335	337	338	335	329	324	329	325	330	332	330	331	332	334
12	338	338	335	337	340	338	340	337	326	316	314	317	321	325	331	338	341	340
13	331	332	336	334	334	339	339	334	328	327	323	322	329	333	335	331	334	332
14	325	328	326	326	326	335	336	340	328	323	326	325	337	342	338	341	323	325
15	334	340	336	335	336	337	334	334	328	325	326	326	327	336	335	330	331	332
16	343	338	336	336	338	340	339	338	335	334	338	341	345	348	347	340	345	346
17	345	346	346	347	346	345	341	338	332	332	328	331	337	341	334	334	335	339
18	348	358	351	350	357	355	353	342	338	333	340	342	346	348	342	350	350	349
19	341	338	345	336	332	338	333	333	328	324	326	327	334	339	341	336	335	333
20	329	326	324	324	322	324	322	319	320	320	316	317	320	324	330	332	331	333
21	319	316	317	321	321	317	321	325	324	323	325	328	330	331	329	331	330	339
22	331	331	330	330	330	330	330	325	324	320	323	325	329	330	333	335	340	338
23	327	326	328	329	326	331	329	327	322	319	319	318	318	319	319	323	323	326
24	326	320	324	329	330	333	335	336	330	324	328	329	330	332	333	340	343	338
25	338	345	341	332	333	336	338	343	336	335	334	331	340	341	347	347	347	345
26	315	312	311	310	308	306	306	310	312	303	302	302	302	309	318	321	323	321
27	319	319	320	319	323	321	318	320	326	318	317	323	319	324	322	325	324	328
28	319	317	315	313	311	308	303	305	303	298	300	306	311	323	324	323	322	323
29	321	313	312	313	309	310	309	310	301	302	304	311	317	323	329	329	324	325
30	316	317	315	309	312	309	308	309	303	303	300	305	310	317	324	325	328	325
平均 Mean	3306	3300	3292	3285	3284	3294	3287	3267	3226	3205	3216	3241	3279	3321	3335	3335	3336	3335

空中電氣

日	午前					A. M.						正午	午後					
Day	1	2	3	4	5	6	7	8	9	10	11	Noon	1	2	3	4	5	6
1	81	66	63	70	98	149	167	141	131	117	79	44	85	94	102	74	84	165
2	141	144	133	127	135	152	200	167	122	118	85	62	73	116	102	130	91	118
3	102	93	99	95	94	119	165	191	135	119	76	97	107	113	75	69	80	80
4	114	121	109	93	95	117	124	134	121	46	41	41	27	30	11	21	35	37
5	33*	22*	20*	8*	8*	16*	+	−	±	±	+	−	−	±	··	··	+	+
6	±	-	±	+	−	+	+	+	±	--	+	+	0*	26*	37*	38*	56*	51*
7	64	65	38	24	49	38	105	87	65	68	58	59	43	50	57	61	72	95
8	85	73	76	94	121	169	162	149	103	70	68	50	50	44	45	60	134	94
9	67	60	83	95	105	120	121	99	86	66	68	57	82	64	53	76	75	71
10	94	86	75	93	118	141	150	173	66	42	37	30	35	29	41	43	42	35
11	53	41	30	48	61	99	96	89	45	47	47	28	25	9	14	14	9	20
12	75	107	103	93	101	111	143	107	93	66	59	51	46	50	55	66	75	93
13	113	116	111	95	111	118	117	104	73	66	57	51	41	38	39	52	89	133
14	114	107	101	102	109	118	146	129	104	73	70	62	59	36	66	64	86	123
15	112	123	96	110	118	163	139	134	111	95	59	56	50	53	50	60	35	109
16	58*	58*	53*	54*	75*	91*	92*	86*	67*	44*	34*	22*	±				−	−
17	±	+	-	−	·	-	—	-	16*	30*	28*	48	24	36	44	66	84	141
18	51	49	48	27	43	94	109	76	41	47	38	44	27	23	23	21	33	28
19	27	31	35	32	33	42	51	58	56	30	28	30	±		±	-	—	±
20	37	48	43	43	42	49	46	40	45	30	27	23	19	17	16	17	23	25
21	27	27	25	27	28	30	36	34	34	32	26	21	22	18	17	20	19	24
22	19	23	23	24	26	28	42	51	29	22	22	21	15	14	17	20	21	24
23	33	33	30	28	23	23	17	12	20	18	21	22	26	21	21	26	32	28
24	−29*	0*	10	14	13	15	16	16	16	17	13	15	14	14	15	16	20	21
25	16	19	22	26	23	48	66	66	25	22	26	42	12	13	21	21	27	28
26	54	68	75	94	72	85	121	119	87	50	40	33	28	28	26	23	−1*	26
27	39	37	21	27	31	44	48	46	39	30	35	30	28	23	22	19	25	27
28	35	37	38	40	48	54	58	64	54	56	44	40	24	19	26	20	29	44
29	20	21	25	32	49	61	67	48	32	31	36	38	47	21	15	63	62	113
20	94	73	72	85	125	219	254	>258	247	122	85	56	34	35	42	45	−12	33
平均 Mean	66.7	66.8	60.9	63.0	72.0	92.5	107.2	99.7	76.4	57.7	47.9	42.6	40.1	38.8	39.0	44.9	50.8	64.5

NOVEMBER, 1897.

VERTICAL MAGNETIC INTENSITY.

P. M. 7	8	9	10	11	夜半 M. N.	平均 Mean	最大 Maximum	h m	最小 Minimum	h m	較差 Range	記事 Remarks
343	344	346	334	341	341	3362	346	9 00 p	303	11 00 a	$.0^{3}$ 43	C morning, A afternoon
334	340	342	339	336	334	3320	345	1 15 p	313	9 00 a	32	A
336	339	338	340	339	333	3365	349	Noon	324	9 00 a	25	C
327	328	329	329	327	318	3277	334	6 00 a	318	M.N.	16	C 0.a–8.p, A 8p–M.N.
327	327	331	332	333	328	3237	333	11 00 p	312	9 00 a	21	A
325	327	329	330	335	330	3255	335	11 00 p	316	11 00 a	19	A
339	339	339	338	337	341	3302	341	M.N.	314	11 00 a	27	C
335	338	338	336	337	334	3331	338	7 45 p	327	9 00 a	11	C morning, A afternoon
350	350	350	346	350	340	3383	353	7 30 p	321	10 00 a	32	A
338	337	338	336	335	339	3374	345	3 00 p	328	10 26 a	17	A
336	339	339	339	339	339	3334	339	11 26 p	322	9 38 a	17	A
341	342	343	345	338	342	3339	345	10 00 p	314	11 00 a	31	C
334	333	333	331	328	336	3316	340	7 12 a	322	Noon	18	C
332	337	343	341	342	340	3327	345	8 32 p	319	4 50 p	26	C morning, S° afternoon
336	342	343	343	343	336	3344	344	10 30 p	324	10 30 a	20	A
344	346	349	348	355	347	3423	355	10 20 p	334	10 00 a	21	C 0.a–7.p, A 7.p–M.N.
340	343	347	353	357	354	3413	358	11 10 p	328	11 00 a	30	C morning, S° afternoon
349	347	346	345	343	340	3457	**362**	0 09 a	333	10 00 a	29	S° morning, A afternoon
334	336	336	333	333	329	3342	347	2 42 a	323	9 45 a	24	A morning, C afternoon
329	328	329	326	329	320	3247	333	6 00 p	316	11 00 a	17	C
333	336	335	336	336	331	3268	338	8 20 a	315	1 30 a	23	A morning, C afternoon
336	331	331	334	330	329	3302	340	5 00 p	320	10 00 a	20	C
323	323	324	325	322	324	3237	331	6 00 a	318	1 00 p	13	C
340	344	339	334	338	330	3327	344	8 00 p	320	2 00 a	24	A
348	346	345	350	340	317	3398	350	10 00 p	317	M.N.	33	A
322	320	320	323	324	319	3133	326	10 50 p	302	1 00 p	24	A
328	332	326	322	321	323	3224	332	8 00 p	317	11 00 a	15	A
323	322	325	322	319	320	3148	325	9 00 p	298	10 00 a	27	C
324	325	325	324	325	321	3169	329	4 00 p	301	9 00 a	28	C
323	323	322	317	309	303	3138	328	5 00 p	**300**	11 00 a	28	C
3343	3355	3360	3350	3347	3306	3300	3410		3173		$.0^{3}$ 237	

ATMOSPHERIC ELECTRICITY.

P. M. 7	8	9	10	11	夜半 M. N.	平均 Mean	最大 Maximum	h m	最小 Minimum	h m	較差 Range	記事 Remarks
131	140	112	123	119	135	104.8	>203	5 45 a	34	11 48 a	>169	≡°5.45a–7.40a
183	140	135	124	103	101	125.4	>201	7 00 a	40	1 12 p	>161	–
84	103	94	118	110	91	101.5	>199	7 30 p	62	4 54 p	>137	≡°5.35a–8.30a, ≡°8.p–11.p
35	36	36	41	35	33	61.0	181	7 10 a	5	2 47 p	176	–
+	+	+	+	±	–	...	+	...	–	...	...	●°5.50a–●10.10p–
41*	27*	62*	49*	50*	64*	...	+	...	–	...	...	–●–●°5.45a–8.20p
64	51	73	72	72	91	63.4	110	6 50 a	12	5 46 a	98	●°5.05–5.20a
77	101	124	124	131	70	94.7	185	6 20 a	40	2 50 p	145	–
107	94	100	103	95	86	84.8	128	5 34 a	48	2 05 a	80	..
50	59	62	56	54	56	69.5	195	7 42 a	26	4 30 p	169	..
41	53	59	74	65	77	17.7	109	6 22 a	-11	4 24 p	120	●°5.20p–5.30p, ●°9.p–9.35p
94	107	123	128	121	119	91.1	144	8 30 p	46	1 35 p	98	–
79	109	107	111	102	111	89.3	221	6 18 p	38	2 00 p	183	≡°7.30p–11.10p
200	248	102	165	123	109	109.0	**267**	8 14 p	31	1 52 p	236	–
75	62	61	56	70	62	86.6	173	7 36 a	17	5 10 p	156	●°11.30p–
–	–	–	–	–	±	...	+	...	–	...	...	–●°–0.30a, ≡°6.05a–7.35a, ●°11.a–●3.30p–
103	132	124	143	112	75	87.1	211	7 35 p	<-**148**	6 30 a	>359	–●–●°6.20a–●7.40a–●°8.35a–11.20a
30	23	23	23	23	26	40.4	124	5 32 a	18	3 38 p	106	–
7*	7*	19*	-7*	26*	33*	37.7	70	8 45 a	-105	4 07 p	175	●°11.20a–●2.40p–●°6.30p–10.15p
28	33	28	26	16	23	31.0	59	6 16 a	0	11 25 p	59	≡2.20a–4.35a ≡°9.p–10.p
34	35	35	35	26	21	27.2	44	8 33 p	17	5 21 p	27	●°6.45a–7.20a
25	29	33	36	37	37	26.6	63	7 38 a	14	2 05 p	49	–
26	23	20	26	21	32	24.2	40	11 58 p	12	8 00 a	28	●°7.40a–9.a ●8.10p–●11.15p
20	22	21	15	17	14	16.1	32	0 00 a	-43	1 10 a	75	–●–●°2.45a–5.40a, ●°8.45a–11.45a
27	33	36	47	57	47	32.1	74	7 14 a	12	2 00 p	62	↯ Noon–1.p
53	46	37	37	36	36	55.4	136	6 48 a	-10	5 10 p	146	≡°7.10a–8.20a ●°4.15p–5.35p
32	37	37	38	42	35	33.0	51	6 46 a	16	3 10 a	35	–
37	31	21	24	19	20	36.7	76	7 36 a	18	11 36 p	58	–
135	101	133	129	134	159	65.5	207	11 35 p	2	2 48 p	205	<°NNE 10.p–11.p
45	67	80	61	34	49	91.8	>258	8 00 a	-33	5 08 p	>221	–
69.8	73.7	69.8	74.4	68.2	66.0	64.7						

明治三十年十二月

偏角　4°W+

日 Day	午前 A.M. 1	2	3	4	5	6	7	8	9	10	11	正午 Noon	午後 1	2	3	4	5	6
1	31.5	31.5	31.6	31.9	31.9	32.2	32.5	32.4	31.3	31.0	32.2	33.2	33.7	33.7	32.5	32.4	32.5	33.5
2	31.8	31.2	32.4	32.5	32.4	32.4	32.5	32.2	31.6	31.8	32.1	32.4	32.7	33.1	33.4	32.5	32.2	32.1
3	32.2	32.2	32 2	32.2-	32.1	32.1	32.1	31.2	31.2	31.6	32.4	33.4	33.4	33.1	32.2	31.5	31.3	31.8
4	32.4	32.2	32.2	32.4	32.4	32.1	32.4	32.1	31.6	32.5	32.4	33.5	33.4	33.2	32.4	31.3	32.1	31.6
5	32.4	32.2	32.1	32.1	32.1	32.2	32.8	32.2	31.3	30.6	31.9	32.2	32.2	32.1	31.9	31.5	31.3	31.5
6	31.3	31.2	32.2	32.1	31.6	32.1	32.2	31.6	20.9	29.9	30.0	31.5	32.4	32.8	32.2	30.9	32.1	32.4
7	31.0	31.3	31.5	31.8	31.9	32.2	32.2	32.2	31.6	30.7	31.3	32.5	33.2	32.9	32.2	31.3	31.2	31.6
8	31.3	31.3	31.2	31.5	31.2	32.1	32.1	30.7	30.4	30.2	30.7	32.1	32.5	32.2	31.5	30.7	30.9	31.2
9	31.2	31:3	31.3	31.3	31.3	31.3	31.8	30.9	30.6	29.7	30.9	32.4	32.7	32.5	32.4	31.3	31.0	31.3
10	31.0	31.0	30.9	30.9	31.2	31.6	32.2	30.6	20.3	30.0	31.0	32.5	33.4	33.1	32.8	31.9	31.6	32.2
11	30.3	30.6	30.7	29.7	31.2	31.8	32.4	32.7	32.5	32.4	32.5	32.7	32.8	30.9	29.4	31.6	28.7	32.5
12	33.1	32.7	30.9	32.2	32.4	32.4	33.8	33.8	34.3	33.2	32.8	33.8	33.7	32.4	31.9	31.3	31.9	32.4
13	32.8	32.7	32.4	32.4	32.4	32.4	32.5	31.8	31.3	31.6	32.2	33.2	33.1	32.9	32.7	32.2	32.1	32.2
14	32.4	32.4	32.2	32.2	32.2	32.2	32.1	30.7	20.2	30.9	32.2	33.8	34.1	33.8	32.7	31.9	32.1	32.2
15	32.4	32.5	32.5	32.1	32.1	31.8	31.6	30.7	39.4	30.7	32.2	32.2	32.2	31.6	31.8	31.2	31.3	31.0
16	31.8	31.3	31.3	32.2	31.3	32.4	32.4	32.1	31.0	32.4	32.7	34.1	33.8	32.2	31.2	31.3	30.9	30.7
17	31.8	31.6	31.6	31.6	31.9	31.5	31.3	30.9	30.2	30.7	31.6	33.4	33.7	33.4	32.4	31.3	32.4	32.4
18	32.5	32.5	32.2	32.4	33.7	32.7	33.5	33.4	32.1	32.7	33.4	33.8	33.7	33.2	32.4	31.9	32.1	31.9
19	31.8	31.6	31.9	31.6	31.3	31.9	32.5	31.6	30.7	30.7	32.7	34.6	35.0	34.3	33.2	32.1	31.3	31.5
20	31.8	31.9	31.6	32.2	31.6	31.6	31.9	30.9	29.9	29.3	29.7	31.9	32.2	32.4	32.1	31.9	31.0	29.6
21	39.4	31.0	32.4	35.0	32.8	35.5	34.4	32.9	32.5	32.8	33.7	35.0	33.7	33.7	33.4	32.1	32.2	32.8
22	32.8	32.1	32.4	32.5	33.2	33.4	32.4	31.6	31.5	31.5	32.2	33.1	33.1	32.8	32.5	32.2	30.9	32.2
23	32.2	33.5	32.2	32.2	32.2	32.1	32.1	32.7	31.0	31.6	32.2	33.4	33.1	32.8	32.8	32.1	31.9	32.1
24	32.2	32.2	32.1	22.1	32.1	32.4	32.4	30.9	30.6	31.2	32.7	34.0	33.7	32.7	32.1	32.1	32.1	31.8
25	32.2	32.2	32.2	32.4	32.7	32.2	32.4	30.9	30.7	31.0	32.2	32.9	32.7	33.4	32.5	32.4	31.5	32.2
26	32.2	31.8	32.4	31.5	32.4	30.5	32.4	31.0	30.2	30.4	31.8	32.7	33.1	33.1	32.4	31.3	31.0	31.9
27	32.2	32.2	32.2	32.1	32.2	32.2	32.1	30.7	30.6	31.0	32.1	32.4	33.1	32.8	32.2	31.5	31.6	31.6
28	31.9	31.9	31.9	31.9	32.1	32.1	32.1	30.7	30.0	31.6	33.5	33.1	33.5	32.4	31.2	30.7	30.7	30.9
29	32.1	32.1	32.1	31.9	32.1	32.1	31.2	30.6	29.9	30.9	32.4	32.9	33.1	32.4	32.2	32.1	32.1	32.4
30	32.1	32.2	32.5	32.5	32.2	32.2	32.7	31.0	32.2	33.4	35.0	35.2	34.0	32.4	31.3	31.2	31.2	31.3
31	32.2	32.2	33.4	34.3	32.2	32.2	32.1	31.3	32.1	...	...	33.8	33.7	32.5	32.1	31.2	31.2	30.7
平均 Mean	31.88	31.89	31.96	32.12	32.08	32.25	32.36	31.58	31.05	31.27	32.16	33.15	33.25	32.80	32.19	31.64	31.51	31.79

水平磁力　0.29′..........+

日 Day	午前 A.M. 1	2	3	4	5	6	7	8	9	10	11	正午 Noon	午後 1	2	3	4	5	6
1	830	829	829	836	832	834	840	845	845	839	827	821	821	823	827	825	809	805
2	812	809	807	816	817	817	825	829	829	822	822	823	816	810	809	805	807	809
3	817	815	811	817	822	821	826	825	824	819	818	819	822	827	829	826	827	823
4	820	819	820	822	823	826	824	828	831	829	829	830	831	830	832	828	820	800
5	812	824	822	324	826	826	824	832	839	833	818	819	812	816	816	812	803	809
6	820	818	819	817	819	823	829	839	841	838	827	821	813	816	820	820	808	798
7	817	817	819	821	819	822	832	836	835	835	831	827	825	824	823	820	821	920
8	824	824	829	829	829	828	837	832	824	819	818	822	823	827	829	827	824	823
9	824	825	828	828	831	832	840	843	840	836	832	832	828	828	830	829	828	827
10	838	842	843	845	848	846	849	854	852	855	852	842	841	828	826	828	824	821
11	791	800	804	804	806	803	813	825	831	832	833	833	818	793	814	783	790	756
12	745	757	764	768	750	763	767	786	790	786	786	789	795	801	799	786	760	742
13	783	786	787	788	792	793	797	796	789	779	776	781	788	791	794	800	801	796
14	801	802	801	803	802	802	802	796	784	783	784	789	792	799	806	806	802	801
15	805	804	809	809	810	811	812	812	801	792	795	802	805	808	798	797	787	802
16	810	813	818	818	821	816	813	817	814	803	795	777	808	820	817	812	807	811
17	819	813	819	822	824	829	825	827	830	817	816	817	820	823	821	815	815	813
18	821	816	826	823	839	840	841	838	836	820	809	810	816	820	820	823	819	817
19	815	816	818	820	819	822	823	829	827	815	809	815	819	821	823	826	822	821
20	821	817	816	825	825	824	827	833	831	830	831	829	830	832	832	837	850	854
21	719	709	735	745	749	763	781	773	790	778	770	761	775	778	770	781	780	774
22	787	791	802	787	790	798	796	806	807	798	800	797	794	797	799	793	788	788
23	803	807	815	805	807	807	812	805	816	812	812	808	805	798	805	812	814	812
34	801	807	821	817	816	813	822	823	821	817	814	820	818	818	820	804	799	792
25	815	818	819	814	822	821	815	814	807	801	804	805	809	814	812	813	815	812
26	821	810	812	815	811	815	817	817	813	808	807	806	811	819	824	827	822	819
27	818	817	817	817	818	818	816	814	808	796	804	816	821	824	825	823	819	817
28	817	816	815	816	817	818	817	817	811	801	812	827	839	838	830	827	829	831
29	829	830	830	832	832	831	834	831	818	822	828	837	837	838	830	824	805	806
30	792	799	809	809	814	815	821	825	825	815	815	815	819	823	822	815	817	816
31	810	808	824	829	826	825	828	829	826	818	821	824	830	836	837	833	822	832
平均 Mean	8076	8084	8125	8136	8147	8162	8195	8218	8205	8144	8127	8134	8155	8168	8174	8147	8108	0

DECEMBER, 1897.

MAGNETIC DECLINATION.

P. M. 7	8	9	10	11	夜半 M. N.	平均 Mean	最大 Maximum		最小 Minimum		較差 Range	記事 Remarks
′	′	′	′	′	′	′	′	h m	′	h m	′	
32.8	32.8	33.1	32.2	32.2	31.9	32.35	33.7	2 00 p	31.0	10 00 a	2.7	A
32.2	32.7	32.5	32.5	32.2	32.7	32.34	33.4	3 00 p	31.2	2 00 a	**2.2**	A
32.2	32.4	32.5	32.4	32.2	32.4	32.18	33.5	0 35 p	30.7	8 35 a	2.8	C
32.2	32.4	32.2	31.8	32.2	32.4	32.31	33.7	0 20 p	30.4	9 25 p	3.3	C morning, A afternoon
31.5	31.3	31.6	31.5	29.9	30.9	31.72	32.8	7 00 a	29.9	11 00 p	2.9	C morning, A afternoon
31.6	31.5	31.9	31.2	30.7	31.0	31.55	33.1	1 30 p	29.9	10 00 a	3.2	A
31.6	30.9	31.5	31.5	31.3	31.3	31.70	33.2	1 00 p	30.7	10 00 a	2.5	C
31.3	31.6	31.6	3.19	31.0	31.2	31.35	32.7	0 30 p	29.7	10 05 a	3.0	C
31.3	31.2	31.8	30.9	30.9	31.3	31.32	32.7	1 00 p	29.4	9 00 a	3.3	C
32.4	33.2	32.5	32.2	31.5	31.3	31.72	33.4	1 00 p	29.9	9 45 a	3.5	C
34.1	38.2	35.2	34.0	33.7	32.8	32.22	**40.0**	8 07 p	**26.0**	2 25 p	14.0	C morning, S afternoon
34.3	33.1	32.4	32.1	33.4	33.1	32.81	34.3	7 00 p	30.9	3 00 a	3.4	A
32.5	32.7	32.5	32.4	32.4	32.2	32.40	33.7	0 30 p	31.3	9 00 a	2.4	C
32.1	32.2	32.5	32.9	32.8	32.5	32.30	34.1	1 00 p	29.7	9 20 a	4.4	C
31.3	31.3	31.3	31.2	31.0	31.6	31.54	33.1	3 40 a	29.1	9 20 a	4.0	C morning, A afternoon
32.1	31.9	31.9	31.5	31.9	31.9	31.93	34.1	Noon	30.2	5 50 p	3.9	A
32.1	31.9	31.8	32.1	32.1	32.1	31.91	33.7	1 00 p	30.2	9 00 a	3.5	C
32.2	31.9	32.1	31.3	32.2	31.8	32.57	33.8	Noon	31.3	10 00 p	2.5	A morning, C afternoon
31.6	31.9	31.8	31.3	31.5	31.6	32.08	35.0	1 00 p	30.4	9 50 a	4.6	C
30.4	31.0	29.9	30.7	31.9	29.7	31.13	32.8	11 50 p	29.3	10 00 a	3.5	C, S late at night
31.8	31.2	31.8	32.2	32.4	32.5	32.80	36.8	6 10 a	28.1	1 15 a	8.7	S morning, A afternoon
31.6	31.2	32.1	31.2	31.6	32.2	32.18	34.3	2 20 a	30.9	5 00 p	3.4	A
30.4	32.1	32.1	32.2	32.2	32.1	32.22	33.5	0 50 p	30.4	7 00 p	3.1	A early in morning, C
31.6	32.8	32.4	32.2	31.9	32.1	32.18	34.1	0 50 p	29.9	6 35 p	4.2	C
32.1	32.5	32.1	32.1	32.1	32.2	32.16	33.4	2 00 p	30.7	9 00 a	2.7	C
32.1	32.2	32.2	32.1	32.2	32.1	31.96	33.2	1 30 p	30.2	10 00 a	3.0	C
32.1	32.1	32.2	32.1	31.9	31.9	31.96	33.1	1 00 p	30.0	8 30 p	3.1	C
31.0	31.3	31.0	31.0	31.6	31.6	31.65	33.8	0 50 p	29.7	8 45 a	4.1	C
31.5	33.4	32.8	31.2	31.9	31.6	31.97	33.8	7 40 p	29.7	8 30 a	4.1	C morning, A afternoon
31.9	31.6	31.0	31.6	32.1	32.4	32.30	35.2	Noon	30.7	9 40 p	4.5	A
32.4	31.6	30.9	31.3	30.7	30.7	32.04	...	...	...	...	...	A
31.95	32.20	32.04	31.83	31.86	31.84	32.03	33.93		30.05		3.88	

HORIZONTAL MAGNETIC INTENSITY.

P. M. 7	8	9	10	11	夜半 M. N.	平均 Mean	最大 Maximum		最小 Minimum		較差 Range	記事 Remarks
								h m		h m		
802	797	791	803	807	811	8220	845	9 00 a	791	9 00 p	0³ 54	C morning, A afternoon
804	805	805	815	812	817	8142	829	8 00 a	804	7 00 p	25	C morning, A afternoon
815	815	813	713	822	820	8202	829	3 00 p	811	3 00 a	**18**	C
816	815	812	812	816	817	8221	836	3 10 p	800	6 00 p	36	C morning, A afternoon
803	803	807	808	821	815	8177	839	9 00 a	802	4 35 p	37	C morning, A afternoon
805	810	809	811	828	821	8196	842	8 20 a	797	0 45 p	45	A Early in morning, C
820	819	823	822	822	823	8239	836	8 00 a	813	7 40 p	23	C
822	820	820	819	825	827	8250	837	7 00 a	818	11 00 a	19	C
829	836	835	831	829	835	8315	843	8 00 a	789	1 10 a	54	C
814	807	794	798	790	796	8305	855	10 00 a	789	11 05 p	66	C morning, A afternoon
750	718	702	730	741	747	7882	838	11 50 a	**763**	9 10 p	**165**	A morning, S afternoon
742	754	776	791	778	776	7730	804	1 20 p	732	6 20 p	72	S° morning, A afternoon
796	795	803	801	802	800	7922	803	8 50 p	776	11 00 a	27	C
802	804	806	804	804	804	7991	807	9 05 p	781	10 20 a	26	C
805	802	806	806	812	814	8043	814	M.N.	784	4 50 p	30	C morning, A afternoon
805	812	807	817	813	814	8107	837	4 35 a	777	Noon	60	A
806	810	809	816	823	825	8190	832	9 05 a	803	7 10 p	29	A
814	819	815	813	810	814	8216	846	6 50 a	808	10 50 a	38	A morning, C afternoon
820	819	821	823	822	822	8203	829	8 00 a	809	11 00 a	20	C
857	847	860	801	725	745	8241	**860**	9 00 p	718	11 05 p	142	C morning, A afternoon, S night
781	789	784	781	797	817	7700	824	11 50 p	700	2 07 a	124	S morning, S° afternoon
791	807	792	805	817	802	7972	826	10 40 p	779	4 35 p	47	S°
815	812	811	809	807	808	8090	821	7 10 p	797	2 10 p	24	S°
801	807	807	812	815	815	8125	823	8 00 a	788	6 15 p	35	A
812	808	815	813	814	811	8126	824	5 15 a	801	10 00 a	23	A
815	816	818	819	818	820	8158	827	4 00 p	806	Noon	21	C
814	811	814	815	817	817	8157	825	3 00 p	795	10 25 a	30	C
829	831	834	833	830	830	8235	842	0 40 p	800	9 50 a	42	C
796	785	760	766	777	785	8151	839	1 45 p	754	9 55 p	85	C morning, S° afternoon
812	816	815	813	812	810	8143	825	8 00 a	785	0 00 a	40	A morning, C afternoon, A late at night
815	797	797	814	806	829	8215	840	2 55 p	786	11 25 p	54	A morning, S afternoon
8067	8060	8052	8069	8068	8093	8125	8315		7828		0³ 487	

明治三十年十二月

鉛直磁力 0.34…………＋

日 Day	午前 A.M. 1	2	3	4	5	6	7	8	9	10	11	正午 Noon	午後 1	2	3	4	5	6
1	341	341	342	344	344	352	348	346	340	339	332	330	336	335	342	341	329	329
2	341	339	339	340	339	340	342	342	341	336	334	339	335	333	334	334	334	337
3	339	338	338	336	339	338	342	340	335	333	331	335	338	342	338	335	334	335
4	336	335	337	339	338	337	331	338	334	334	329	336	332	333	334	335	334	327
5	340	338	337	336	333	336	334	337	337	331	327	329	325	333	333	332	329	333
6	339	342	335	343	342	343	342	343	342	341	333	331	329	333	333	333	331	330
7	337	339	339	342	341	342	344	348	348	341	337	334	335	342	342	339	339	339
8	342	346	350	352	352	349	353	350	346	341	340	339	337	341	343	341	342	342
9	342	343	342	343	347	350	351	351	345	340	326	334	332	334	338	336	334	336
10	350	352	351	353	352	354	358	359	355	346	338	336	334	328	329	329	331	330
11	319	321	326	326	326	327	333	337	336	337	334	333	332	323	327	323	328	328
12	350	356	357	353	342	352	352	360	356	347	346	347	350	353	355	345	336	335
13	354	353	355	355	357	360	360	358	352	342	331	336	341	343	347	352	354	356
14	352	351	350	351	352	355	355	353	344	345	345	347	349	351	352	350	346	348
15	346	348	349	347	346	351	350	353	339	329	334	347	349	346	338	336	337	350
16	350	350	353	353	349	349	354	358	358	343	340	343	356	360	356	352	352	353
17	356	355	359	356	355	359	356	358	357	346	345	345	347	353	354	346	344	345
18	353	349	353	349	359	360	362	360	359	352	342	349	358	362	362	362	358	457
19	355	356	356	356	354	354	355	354	353	342	338	350	355	358	357	360	352	351
20	357	356	351	353	350	348	352	353	350	344	345	348	348	355	355	356	360	357
21	325	338	359	366	365	365	373	361	364	349	349	348	356	363	359	366	361	357
22	349	352	357	350	351	356	362	363	362	354	352	363	355	357	359	355	356	357
23	356	355	356	357	355	353	362	360	360	358	355	356	358	354	357	362	367	363
24	352	357	361	360	358	361	362	361	353	347	349	356	357	360	358	361	353	350
25	355	355	354	352	359	356	359	357	348	341	354	340	346	349	349	351	347	348
26	351	348	347	348	348	353	354	357	356	348	344	344	349	355	359	357	353	348
27	348	347	346	346	351	352	354	354	345	340	345	353	349	351	352	351	347	346
28	346	344	344	345	348	350	350	350	340	337	347	360	362	362	352	346	347	351
29	345	346	350	350	349	347	349	347	343	340	345	346	350	347	349	342	336	340
30	353	356	359	352	356	354	358	360	351	353	358	361	361	357	350	346	346	349
31	351	351	361	364	354	352	357	358	354	353	349	346	353	353	353	349	339	344
平均 Mean	3461	3470	3488	3489	3487	3502	3521	3525	3485	3430	3412	3439	3456	3473	3473	3459	3437	3442

空中電氣

日 Day	午前 A.M. 1	2	3	4	5	6	7	8	9	10	11	正午 Noon	午後 1	2	3	4	5	6
1	53	56	67	75	122	181	207	211	146	66	35	22	47	48	51	54	164	163
2	100	86	80	74	148	228	276	…	…	235	136	82	80	54	66	63	63	148
3	202	164	159	169	174	214	240	259	256	186	143	113	+	+	+	…	…	…
4	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…
5	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…
6	…	…	…	…	…	…	…	…	…	…	…	…	…	…	13	42	74	132
7	181	164	146	133	132	149	141	204	190	207	200	179	130	31	42	53	68	121
8	101	107	106	110	141	145	182	202	187	200	169	135	135	117	90	85	59	163
9	104	92	80	86	101	146	193	150	141	118	116	110	111	88	78	107	106	192
10	212	214	208	198	198	192	215	192	206	179	169	89	27	58	37	36	65	95
11	47	45	48	35	53	89	116	46	33	−27	±	±	30	9	17	21	49	68
12	6	9	−6	78	55	99	108	162	150	51	71	75	55	16	59	49	88	61
13	181	195	177	127	133	177	207	225	229	171	98	82	82	74	86	90	84	115
14	155	172	167	144	180	205	217	222	218	211	171	188	111	77	64	58	81	115
15	64	47	48	54	54	134	173	222	195	154	131	66	45	37	25	27	56	58
16	60	52	53	59	73	86	136	169	146	82	60	58	20	33	4	36	60	177
17	125	113	124	117	143	195	+	+	+	187	96	77	52	23	48	34	78	139
18	147	155	178	178	181	202	230	254	214	168	87	69	62	32	39	53	91	110
19	182	123	114	136	130	201	151	234	192	117	88	57	…	42	52	19	117	107
20	112	99	98	101	104	166	196	196	176	101	65	64	…	68	72	77	101	143
21	90	123	146	92	109	142	113	98	99	74	49	47	29	24	38	39	59	108
22	82	67	70	79	92	151	190	230	205	85	62	43	53	16	26	46	62	115
23	164	176	164	151	125	176	…	…	…	…	161	107	102	99	53	76	85	109
24	148	148	139	124	112	191	235	271	198	122	86	82	66	33	26	46	76	106
25	73	104	87	73	96	126	109	195	146	76	46	35	35	19	15	−7	30	93
26	80	68	66	68	71	91	183	133	206	183	123	126	+	±	30	56	63	76
27	127	120	123	97	72	95	125	120	77	—	—	—	…	…	…	…	40	41
28	56	55	61	45	46	58	73	…	…	…	…	…	13	5	30	56	120	96
29	113	103	80	87	103	105	120	163	127	63	55	42	54	3	−23	−8	42	31
30	73	63	60	90	140	219	277	210	327	237	162	97	62	58	40	50	110	164
31	199	157	114	107	109	112	141	134	122	131	132	111	72	59	59	52	60	60
平均 Mean	114.9	109.9	105.6	103.1	114.2	152.7	175.1	187.6	174.4	135.1	108.4	88.2	64.0	44.9	42.1	48.5	76.8	110.9

DECEMBER, 1897.

VERTICAL MAGNETIC INTENSITY.

P. M. 7	8	9	10	11	夜半 M. N.	平均 Mean	最大 Maximum	h m	最小 Minimum	h m	較差 Range	記事 Remarks
332	334	335	343	345	344	3393	352	6 00 a	324	5 20 p	$.0^3$ 28	C morning, A afternoon
335	338	342	344	342	341	3384	344	10 00 p	332	4 50 p	12	C morning, A afternoon
334	335	334	335	339	336	3366	342	2 00 p	331	11 00 a	11	C
334	334	335	335	340	339	3348	340	11 00 p	327	6 00 p	13	C morning, A afternoon
331	334	336	337	341	339	3341	341	11 00 p	325	1 00 p	16	C morning, A afternoon
335	338	339	339	344	339	3375	344	11 00 p	329	1 00 p	15	A early in morning, C
340	341	345	343	344	342	3411	349	8 30 a	334	Noon	15	C
341	340	341	340	343	341	3438	353	7 00 a	337	1 00 p	16	C
337	342	342	343	345	346	3408	353	7 30 a	326	11 00 a	27	C
327	325	320	321	320	325	3385	361	7 50 a	319	9 10 p	42	C morning, A afternoon
333	336	342	350	354	352	3326	359	10 50 p	**294**	8 20 p	65	A morning, S afternoon
343	350	358	363	354	350	3504	364	10 15 p	334	5 20 p	30	S° morning, A afternoon
356	356	357	355	355	352	3517	360	6 00 a	334	11 00 a	26	C
348	348	348	349	349	344	2492	355	7 00 a	344	9 00 a	11	C
×	×	×	351	354	353	3454	354	11 00 p	329	10 00 a	25	C
354	362	358	363	360	357	3535	363	10 00 p	340	11 00 a	23	A
346	352	353	356	355	355	3522	359	6 00 a	344	5 00 p	15	C
357	360	359	360	357	361	3567	362	3 00 p	342	11 00 a	20	A morning, C afternoon
352	352	354	355	355	356	3533	360	4 00 p	338	11 00 a	22	C
356	355	353	333	319	343	3499	360	5 00 p	319	11 00 p	41	C morning, A afternoon, S night
358	360	359	358	365	372	3582	**373**	7 00 a	322	0 50 a	51	S morning, S° afternoon
357	362	355	362	363	355	3568	366	10 45 p	349	1 00 a	17	S°
362	365	363	361	357	355	3586	367	5 00 p	353	6 00 a	14	A
358	356	357	359	359	360	3569	362	7 00 a	347	10 00 a	15	C
349	349	354	352	352	351	3511	359	7 00 a	340	Noon	19	C
345	349	356	354	351	354	3512	359	3 00 p	344	11 00 a	15	C
346	347	347	351	353	348	3487	355	7 40 a	340	10 00 a	15	C
351	355	355	355	350	347	3497	364	0 40 p	336	9 25 a	28	C
338	337	336	335	347	354	3445	354	M.N.	335	10 00 p	19	C morning, S° afternoon
349	352	353	353	350	353	3537	361	Noon	346	5 00 p	15	A morning, C afternoon, A late at night
343	338	342	358	349	360	3513	364	4 00 a	336	7 50 p	28	A morning, S afternoon
3449	3467	3476	3488	3487	3492	3471	3567		3339		$.0^3$ 229	

ATMOSPHERIC ELECTRICITY.

P. M. 7	8	9	10	11	夜半 M. N.	平均 Mean	最大 Maximum	h m	最小 Minimum	h m	較差 Range	記事 Remarks
192	221	197	127	96	75	111.5	262	8 20 p	−33	11 55 a	295	–
242	228	235	221	188	162	145.2	275	7 30 a	38	4 36 p	237	–
...	...	...	...	...	...	106.6	...	...	...	...	...	≡5.50p–7.30p
...	...	...	...	...	...	...	...	...	...	...	...	≡°7.40a–8.15a < S7.p
...	...	...	...	...	...	...	...	...	...	...	...	–
66	130	202	256	228	216	135.9	...	...	...	...	...	≡°6.30a–8.15a
163	110	167	178	141	114	139.3	221	9 45 p	24	4 35 p	197	–
161	154	182	179	140	119	140.4	219	5 25 a	−76	4 10 p	295	●°4.00p–4.25p ●°240p–2.50p
171	137	154	152	158	173	127 7	>212	10 50 p	68	2 45 p	>144	≡² 9.30p–≡10.20p–
53	112	89	82	43	42	125.5	>219	7 30 a	8	3 36 p	>211	–≡–≡² 0.50a–≡2.50a–4.30a
62	38	38	30	54	24	42.0	138	6 40 a	−75	Noon	213	●°0.50a–1.20a △°10.a–1.05p
102	147	181	165	196	182	90.0	>208	11 50 p	−10	3 15 a	>218	△°4.a–4.05a △°8.30a–8.55a
141	185	179	218	177	142	149.0	231	8 30 a	68	11 15 a	163	-
118	139	152	171	129	93	148.2	>217	7 00 a	55	3 35 p	>162	–
58	55	55	35	34	39	77.7	>224	7 30 a	18	2 15 p	>206	-
159	149	167	132	144	106	92.5	>202	6 30 p	−3	3 00 p	>205	–
186	237	180	154	165	142	124.5	>261	6 p–9p	19	1 50 p	>242	△°7.30p
117	105	105	130	172	151	134.6	296	6 30 a	16	8 20 p	280	–
169	244	153	253	175	128	133.4	328	7 45 a	−10	4 25 p	338	–
143	142	114	109	106	95	115.1	243	6 25 a	49	11 05 a	194	< E 1.a–3.a
124	119	130	154	135	108	93.7	177	10 52 a	16	4 05 p	161	-
197	134	115	161	226	134	110.0	256	7 55 a	−7	2 25 p	263	
227	207	137	153	237	169	143.8	...	...	...	...	...	
63	76	89	101	120	106	115.2	297	7 55 a	0	3 30 p	297	-
139	127	111	142	126	86	86.7	205	8 25 a	−20	3 52 p	225	
70	46	60	110	130	128	98.5	232	8 50 a	<−**189**	2 20 p	>421	–
46	51	59	43	61	66	80.2	...	...	...	...	...	⚡
95	86	93	108	83	96	67.1	...	...	...	...	...	△°6.25a △°7.16a–7.25a △°8.10a–8.25a ✱°1055a–11a
29	67	52	55	68	73	66.8	>190	7 50 a	<−25	2 p–4p	>215	– < E 1100p–M.N.
122	137	90	105	157	139	132.9	>**367**	7a–9 a	30	3 00 p	>337	-
90	107	114	102	102	107	105.5	218	1 25 a	49	3 35 p	>169	–
125.2	131.7	128.6	136.6	135.4	114.8	113.7						

年

偏角 4°W+

月 Month	1	2	3	4	5	6	7	8	9	10	11	正午 Noon	1	2	3	4
	午前 A. M.												午後			
一月 Jan.	29.53	29.40	29.34	29.40	29.59	29.60	29.40	28.49	28.45	29.18	30.84	31.70	31.68	30.96	29.98	29.38
二月 Feb.	28.21	27.99	28.16	28.12	28.21	28.33	28.37	27.40	26.63	26.99	28.31	29.66	30.30	30.12	29.45	28.67
三月 Mar.	28.95	28.79	28.98	29.04	29.21	29.42	28.90	27.74	26.81	27.28	29.26	31.47	32.19	32.16	31.47	30.33
四月 Apr.	29.27	29.14	29.13	29.11	29.25	29.19	28.27	27.27	27.24	28.62	30.65	32.21	33.63	33.47	32.54	31.46
五月 May	28.93	28.75	28.59	28.39	27.96	27.26	26.68	26.90	28.04	30.22	31.42	32.30	32.66	32.22	31.23	30.59
六月 June	26.74	26.51	26.34	26.19	25.56	24.57	24.06	24.29	25.40	27.28	28.86	29.88	30.42	30.28	29.50	28.72
七月 July	29.29	29.00	28.87	28.77	28.08	27.23	26.81	27.12	28.11	29.66	31.08	32.25	32.70	32.61	32.01	31.12
八月 Aug.	29.12	28.92	28.65	28.53	28.23	27.37	27.14	27.40	28.76	30.55	32.05	32.87	33.01	32.49	31.55	30.38
九月 Sept.	29.04	28.84	28.62	28.52	28.29	27.57	27.53	27.90	29.22	31.10	32.53	32.93	32.76	31.72	30.47	29.56
十月 Oct.	30.57	30.53	30.47	30.47	30.64	30.78	30.26	29.90	30.13	31.09	32.38	33.15	33.08	32.35	31.63	31.13
十一月 Nov.	31.61	31.51	31.43	31.53	31.64	31.74	31.68	31.26	31.23	31.80	32.53	33.09	33.03	32.61	32.09	31.61
十二月 Dec.	31.88	31.89	31.96	32.12	32.08	32.25	32.36	31.58	31.05	31.27	32.16	33.15	33.25	32.80	32.19	31.64
全年 Annual	29.43	29.27	29.21	29.18	29.06	28.78	28 5	28.10	28.42	29.59	31.01	32.05	32.23	31.98	32.18	30.38

水平磁力 0.29..........+

月 Month	1	2	3	4	5	6	7	8	9	10	11	正午 Noon	1	2	3	4
一月 Jan.	7919	7930	7959	7969	7992	8006	8026	8007	7900	7826	7853	7914	7964	7994	8018	8013
二月 Feb.	8077	8087	8102	8099	8121	8123	8162	8169	8152	8112	8046	8038	8058	8072	8091	8108
三月 Mar.	8202	8212	8202	8204	8205	8226	8260	8229	8178	8121	8061	8083	8144	8219	8241	8216
四月 Apr.	8100	8103	8120	8116	8118	8170	8161	8093	7996	7950	7947	8015	8085	8140	8163	8127
五月 May	8130	8145	8175	8182	8174	8137	8073	8007	7984	8006	8097	8187	8221	8215	8201	8136
六月 June	8277	8276	8279	8283	8300	8299	8249	8194	8168	8177	8215	8273	8303	8291	8304	8281
七月 July	8378	8378	8369	8374	8382	8365	8313	8272	8220	8257	8332	8368	8387	8397	8377	8350
八月 Aug.	8290	8296	3295	8295	8299	8275	8201	8132	8109	8149	8207	8275	8318	8347	8365	8335
九月 Sept.	8116	8125	8126	8129	8122	8105	8047	7964	7909	7949	8012	8102	8176	8230	8225	8176
十月 Oct.	8284	8275	8274	8283	8235	8241	8226	8175	8149	8163	8215	8283	8345	8375	8361	8330
十一月 Nov.	8151	8159	8161	8165	8179	8176	8183	8167	8138	8119	8143	8177	8215	8239	8232	8207
十二月 Dec.	8076	8084	8125	8136	8147	8162	8195	8218	8205	8144	8127	8134	8155	8168	8174	8147
全年 Annual	8166	8172	8082	8186	8189	8190	8175	8136	8092	8081	8105	8154	8198	8224	8229	8202

鉛直磁力 0.34..........+

月 Month	1	2	3	4	5	6	7	8	9	10	11	正午 Noon	1	2	3	4
一月 Jan.	3635	3637	3647	3649	3653	3664	3673	3628	3541	3523	3575	3637	3683	3691	3676	3657
二月 Feb.	3744	3744	3757	3755	3762	3780	3799	3782	3725	3660	3611	3641	3689	3744	3757	3770
三月 Mar.	3667	3671	3667	3668	3672	3707	3729	2681	3592	3475	3420	3481	3576	3656	3690	3694
四月 Apr.	3460	3449	3454	3443	3463	3489	3467	3404	3303	3235	3238	3286	3350	3397	3420	3426
五月 May.	3662	3661	3674	3677	3687	3661	3603	3552	3501	3450	3491	3560	3580	3595	3603	3605
六月 June	4026	4024	4025	4036	4050	4027	3971	3906	3885	3855	3882	3938	3954	3972	3981	3986
七月 July	3546	3546	3529	3559	3564	3546	3496	3454	3403	3413	3447	3459	3477	3490	3509	3506
八月 Aug.	3615	3623	3624	3626	3632	3616	3574	3518	3451	3476	3515	3562	3583	3591	3586	3575
九月 Sept.	3441	3445	3445	3445	3439	3430	3394	3351	3316	3326	3372	3408	3441	3453	3437	3403
十月 Oct.	3546	3538	3536	3516	3486	3499	3495	3460	3423	3403	3421	3474	3506	3551	3544	3528
十一月 Nov.	3306	3300	3292	3285	3284	3294	3287	3267	3226	3205	3216	3241	3279	3321	3335	3335
十二月 Dec.	3461	3370	3488	3489	3487	3502	3521	3525	3485	3430	3412	3439	3456	3473	3473	3459
全年 Annual	3592	3592	3597	3596	3598	3601	3584	3544	3487	3454	3467	3510	3548	3578	3584	3579

空中電氣

月 Month	1	2	3	4	5	6	7	8	9	10	11	正午 Noon	1	2	3	4
一月 Jan.	90.8	85.6	79.7	78.9	101.1	123.0	154.0	170.5	132.5	92.8	67.7	55.0	56.0	47.1	47.5	55.1
二月 Feb.	84.8	83.6	74.5	85.6	96.1	109.5	124.9	142.3	93.7	59.7	44.4	22.7	34.1	29.2	36.3	42.5
三月 Mar.	65.5	70.6	69.8	62.2	65.8	91.6	103.7	76.9	33.1	19.1	21.2	25.0	22.5	16.6	12.5	16.6
四月 Apr.	53.8	51.0	54.1	59.8	80.5	119.0	103.0	71.0	54.2	32.2	28.9	28.0	16.0	8.3	5.0	8.4
五月 May.	27.7	29.0	32.9	32.0	54.0	73.3	70.0	36.7	25.2	13.8	8.5	9.0	5.3	4.0	4.0	7.1
六月 June	26.1	25.7	24.0	25.6	41.2	48.6	39.4	28.2	16.6	10.7	6.8	5.5	3.5	5.0	6.7	10.0
七月 July	10.3	9.6	10.1	14.7	16.1	21.0	17.2	13.9	8.4	6.2	5.5	5.0	4.9	3.7	4.2	4.9
八月 Aug.	7.2	7.1	7.3	8.4	11.2	13.7	12.7	9.3	6.6	4.5	4.1	3.9	3.3	3.1	2.8	3.5
九月 Sept.	14.0	12.5	11.9	13.2	14.2	18.1	18.7	13.7	8.0	4.7	4.2	5.0	3.5	2.3	3.0	4.6
十月 Oct.	56.9	55.3	57.5	60.6	71.8	89.9	102.2	83.5	56.8	39.8	32.2	25.4	28.0	26.7	27.1	30.7
十一月 Nov.	66.7	66.8	60.9	63.0	72.0	92.5	107.2	99.7	76.4	57.7	47.9	42.6	40.1	38.8	39.0	44.9
十二月 Dec.	114.9	109.9	105.6	103.1	114.2	152.7	175.1	187.6	174.4	135.1	108.4	88.2	64.0	44.9	42.1	48.5
全年 Annual	51.6	50.6	49.0	50.6	61.5	79.4	85.7	77.6	57.2	39.7	31.6	26.3	23.4	19.1	19.2	23.1

YEAR.

P. M.								平均	平均 Mean			絕對 Absolute				
5	6	7	8	9	10	11	M. N.	Mean	最大 Max.	最小 Min.	較差 Range	最大 Max.	日 Day	最小 Min.	日 Day	較差 Range
MAGNETIC DECLINATION.																
29′.35	29′.46	29′.64	29′.45	29′.59	29′.53	29′.53	29′.54	29′.71	32′.28	27′.74	4′.54	34.6	3	26.0	3	8.6
28.42	28 46	28.64	28.70	28.36	28.45	28.25	28.32	28.43	30.49	26 16	4 33	32.9	28	24.0	10,24	8.9
29.43	29.50	29.69	29.44	29.38	29.29	29.08	28.92	29.43	32.58	26.51	6.07	34.3	5	23.2	8	11.1
30.26	30.03	30.15	30.08	29.97	29.88	29.76	29.63	30.01	34.00	26.43	7.57	37.6	2	23.3	4	14.3
29.77	29.21	29.57	29.64	29.58	29.39	29.44	29.08	29.50	33.04	25.93	7.11	35 7	22	24.4	6	11.3
27.89	27.31	27.50	27.30	27.41	27.34	27.30	27.03	27.20	30.88	23.57	7.31	35.4	17	22.0	14	13.4
30.28	29.84	30.00	30.12	29.99	29.85	29.66	29.51	29.76	33.34	26.40	6.94	37.0	31	24.8	19	12.2
29.57	29.34	29.68	29.84	29.83	29.81	29.64	29.48	29.70	33.39	26.59	6.80	35.6	29	24.5	23	11.1
29.30	29.88	29.86	29.82	29.96	29.87	29.73	29.31	29.80	33.36	26.94	6.12	36.5	12	23.9	14	12.6
31.09	31.13	31.22	31.18	31.26	30.94	30.95	30.75	31.14	33.42	29.23	4.18	35.6	2	27.8	24	7.8
31.76	31.79	31.91	32.00	31.95	31.91	31.59	31.56	31.87	33.53	30.28	3.25	35.2	25	27.2	1	8.0
31.51	31.79	31 95	32.20	32.04	31.83	31.86	31.84	32.03	33.93	30.05	3.88	40.0	11	26.0	11	14.0
29.89	29.81	29.98	29.98	29.94	29.84	29.73	29.58	29.88	32.85	27.15	5.70	35.87		24.76		11.11
HORIZONTAL MAGNETIC INTENSITY.																
7986	7951	7932	7941	7927	7905	7904	7925	7948	8136	7665	$.0^{3}$ 471	869	29	659	2	$.0^{2}$ 210
8088	8047	8023	8023	8046	8047	8062	8095	8087	8255	7905	350	844	19	754	4	090
8195	8161	8171	8185	8188	8186	8203	8215	8188	8075	7740	335	860	13	754	5	106
8092	8029	8027	8009	8031	8040	8035	8058	8072	8309	7796	513	885	20	712	20	173
8091	8087	8087	8110	8100	8103	8086	8125	8121	8326	7850	476	882	30	748	21	134
8234	8251	8210	8237	8241	8253	8262	8282	8258	8420	8050	369	879	16	732	17	147
8305	8301	8306	8321	8337	8335	8338	8353	8339	8501	8119	381	874	11	727	31	147
8293	8275	8268	8272	8294	8298	8305	8307	8272	8441	8052	388	893	9	769	20	124
8112	8070	8064	8066	8067	8081	8083	8100	8091	8305	7851	454	853	27	762	14	091
8290	8274	8248	8231	8234	8290	8278	8274	8264	8447	8082	365	864	17	765	11	099
8172	8156	8147	8157	8165	8161	8172	8174	8171	8309	8005	304	851	5	768	18	083
8108	8080	8067	8060	8052	8069	8068	8093	8125	8316	7828	487	860	20	673	11	187
8164	8140	8129	8134	8140	8147	8150	8167	8161	8320	7912	$.0^{3}$407	8678		7352		$.0^{2}$1327
VERTICAL MAGNETIC INTENSITY.																
3643	3607	3649	3665	3669	3657	3661	3664	3639	3759	3513	$.0^{3}$ 246	398	29	327	7	$.0^{2}$ 071
3766	3757	3760	3769	3781	3780	3782	3777	3742	3883	3630	253	419	15	317	28	102
3678	3664	3690	3705	3712	3717	3710	3707	3651	3771	3404	367	397	13	306	1	091
3427	3405	3427	3438	3459	3463	3457	3457	3409	3536	3187	348	372	25	281	6	091
3600	3611	3584	3598	3602	3603	3602	3663	3598	3734	3425	310	389	4	308	18	081
3993	4014	3966	3983	3974	3980	3981	4018	3975	4110	3823	287	440	18	353	1	087
3501	3504	3501	3522	3530	3524	3529	3547	3502	3607	3362	245	402	2	301	28	101
3574	3571	3576	3594	3615	3626	3624	3631	3583	3692	3425	266	391	7	311	1	080
3383	3362	3372	3384	3391	3394	3398	3432	3404	3493	3294	198	359	25	313	1	046
3532	3546	3547	3545	3553	3562	3554	3526	3512	3634	3379	255	392	31	311	11	081
3336	3335	3343	3355	3360	3350	3347	3306	3300	3410	3173	237	362	18	300	30	062
3437	3442	3449	3467	3476	3488	3487	3492	3471	3567	3339	229	373	21	294	11	079
3572	3568	3572	3585	3593	3595	3594	3602	3565	3683	3413	$.0^{3}$270	3912		3102		$.0^{2}$081
ATMOSPHERIC ELECTRICITY.																
70.5	82.5	88.2	99.9	108.2	102.2	101.9	95.5	91.0				>530	22	-320	31	>850
56.2	69 9	74.1	93.8	91.7	97.5	89.7	87.9	75.9				332	5	-277	7	609
26.1	32.9	45.5	53.6	63.7	67.5	72.4	61.9	49.8				344	25	< 219	19	>563
14.8	22 2	27.9	39.5	46.8	49.6	52.8	53.6	45.1				368	1	-295	28	663
8.1	10.3	11.7	19.3	17.9	17.1	19.6	22.1	23.4				>456	3	<-417	3	>873
11.1	13.4	17.1	18.8	23.5	21.9	21.4	21.0	19.6				>335	23	<-290	24	>625
6.4	8.1	9.5	10.6	11.4	10.8	10.7	10.4	9.5				>159	14	<-116	14	>275
3.9	6.5	7.3	8.0	9.1	7.6	7.6	7.8	6.9				>157	28	<-126	28	>283
5.2	8.1	12.2	13.1	12.6	13.8	14.2	14.2	10.5				190	11	-197	14	387
41.4	53.5	65.3	69.0	71 2	70.2	67.3	60.8	56.1				>198	21, 30	<-127	31	>325
50.8	64.5	69.8	73.7	69.8	74.4	68.2	66.0	64.5				267	11	<-118	17	>415
76.8	110.9	125.2	131.7	128.6	136.6	135.4	114.8	112.8				>367	30	<-189	26	>556
30.9	40.2	46.1	52.6	54.5	55.8	55.1	51.3	47.2								

VALUES OF THE COEFFICIENTS IN THE PERIODICAL EXPRESSION

週期函數ニ於ル係數ノ値

$$f(t)=p_0+p_1cos\ t+q_1sin\ t+p_2cos2t+q_2sin2t+p_3cos3t+q_3sin3t+p_4cos4t+q_4sin4t$$

in which t is the Central Standard Mean Time (mean time of the meridian 135°E) converted into arc, and $f(t)$ the mean value of the magnetic element at the time t for each month and for the year.

The values of the Coefficients for Declination are given in degrees and minutes of arc and those for Horizontal and Vertical Intensities in 0.000001 C. G. S. units.

式中 t ハ中央標準時ヲ角度ニテ表ハシタルモノ $f(t)$ ハ磁氣要素ノ t 時ニ於ル各月及年ノ平均値ヲ示ス

係數ノ値ハ偏角ニ於テハ度,分ニテ水平及鉛直磁力ニ於テハ 0.000001 C. G. S. 單位ニテ測ル

偏角 MAGNETIC DECLINATION.

月 Month \ 係數 Coefficient		p_0	p_1	q_1	p_2	q_2	p_3	q_3	p_4	q_4
一月	Jan.	4° 29′.71	− 0′.47	− 0′.26	+ 0′.54	+ 0′.32	− 0′.52	− 0′.33	+ 0′.40	+ 0′.13
二月	Feb.	28.43	− 0.27	− 0.55	+ 0.23	+ 0.53	− 0.33	− 0.56	+ 0.28	+ 0.31
三月	Mar.	29.43	− 0.55	− 0.89	+ 0.33	+ 0.95	− 0.49	− 0.86	+ 0.33	+ 0.36
四月	Apr.	30.01	− 0.86	− 1.34	+ 0.74	+ 1.05	− 0.57	− 0.79	+ 0.27	+ 0.17
五月	May	29.50	− 1.06	− 1.29	+ 1.23	+ 0.55	− 0.65	− 0.13	+ 0.05	− 0.13
六月	June	27.20	− 0.95	− 1.60	+ 1.22	+ 0.77	− 0.58	− 0.18	− 0.03	− 0.15
七月	July	29.76	− 0.89	− 1.53	+ 1.06	+ 0.68	− 0.54	− 0.19	− 0.03	− 0.05
八月	Aug.	29.70	− 1.16	− 1.17	+ 1.37	+ 0.39	− 0.67	− 0.16	+ 0.05	− 0.08
九月	Sept.	29.80	− 1.12	− 0.92	+ 1.29	+ 0.02	− 0.77	+ 0.04	+ 0.19	− 0.10
十月	Oct.	31.14	− 0.62	− 0.51	+ 0.53	+ 0.18	− 0.51	− 0.23	+ 0.30	+ 0.03
十一月	Nov.	31.87	− 0.36	− 0.23	+ 0.28	+ 0.06	− 0.33	− 0.19	+ 0.19	+ 0.09
十二月	Dec.	32.03	− 0.17	− 0.05	+ 0.18	+ 0.22	− 0.35	− 0.35	+ 0.22	+ 0.25
全年	Annual	29.88	− 0.69	− 0.86	+ 0.74	+ 0.47	− 0.52	− 0.32	+ 0.18	+ 0.05

水平磁力 HORIZONTAL MAGNETIC INTENSITY.

月 Month \ 係數 Coefficient		p_0	p_1	q_1	p_2	q_2	p_3	q_3	p_4	q_4
一月	Jan.	0.297948	− 6.0	+ 1.1	− 42.8	+ 34.9	+ 1.74	− 33.2	− 1.1	+ 19.0
二月	Feb.	8087	− 10.4	+ 40.4	− 17.4	+ 2.8	+ 3.16	− 2.7	− 10.7	− 0.9
三月	Mar.	8188	+ 25.5	+ 8.0	− 27.4	+ 17.9	+ 3.38	+ 2.2	− 15.8	+ 16.7
四月	Apr.	8072	+ 8.9	+ 18.4	− 31.8	+ 59.1	+ 2.44	− 40.7	− 3.7	+ 21.1
五月	May	8121	+ 2.2	− 11.4	+ 16.6	+ 68.3	− 3.46	− 35.2	+ 8.6	+ 8.1
六月	June	8258	+ 12.1	− 1.6	+ 5.1	+ 41.4	− .62	− 27.8	+ 11.8	+ 2.3
七月	July	8339	+ 13.7	− 1.4	+ 16.0	+ 45.2	− 1.81	− 26.6	+ 9.4	+ 5.7
八月	Aug.	8272	+ 27.9	− 44.0	+ 9.3	+ 61.0	− 1.26	− 35.5	+ 8.1	− 4.1
九月	Sept.	8091	+ 9.0	− 36.2	+ 7.4	+ 87.9	− .92	− 45.1	+ 4.7	+ 8.9
十月	Oct.	8264	+ 0.9	− 38.6	+ 15.9	+ 57.5	+ .07	− 29.1	+ 4.5	+ 5.4
十一月	Nov.	8171	− 11.0	− 9.9	+ 0.8	+ 22.7	+ .61	− 25.4	− 1.8	+ 7.2
十二月	Dec.	8125	− 46.9	+ 23.9	− 11.8	+ 7.9	+ 1.97	− 12.5	− 10.7	+ 5.6
全年	Annual	8161	+ 2.0	+ 3.3	− 4.2	+ 42.1	+ 4.5	− 28.3	+ 1.4	+ 7.9

鉛直磁力 VERTICAL MAGNETIC INTENSITY.

月 Month \ 係數 Coefficient		p_0	p_1	q_1	p_2	q_2	p_3	q_3	p_4	q_4
一月	Jan.	0.343639	+ 17.8	− 15.7	− 5.9	+ 23.4	− 2.9	− 39.6	+ 6.0	+ 17.5
二月	Feb.	3742	+ 39.4	− 6.2	− 34.9	+ 2.6	+ 26.2	− 24.1	− 9.2	+ 10.5
三月	Mar.	3651	+ 72.7	− 19.5	− 53.4	+ 14.3	+ 38.4	− 44.6	− 13.7	+ 24.6
四月	Apr.	3409	+ 74.2	− 5.0	− 39.7	+ 26.6	+ 18.4	− 39.8	+ 1.5	+ 17.3
五月	May	3598	+ 56.4	+ 8.6	− 19.2	+ 49.0	− 4.0	− 21.1	+ 12.4	+ 8.7
六月	June	3975	+ 47.4	− 2.1	− 20.3	+ 42.8	− 4.7	− 15.1	+ 14.4	+ 2.8
七月	July	3502	+ 47.9	− 0.6	− 11.0	+ 28.8	− 7.7	− 17.4	+ 7.4	− 0.8
八月	Aug.	3583	+ 49.0	− 7.5	− 0.7	+ 31.3	− 12.0	− 28.8	+ 11.3	+ 1.9
九月	Sept.	3404	+ 17.2	+ 4.9	+ 10.1	+ 42.6	− 9.6	− 22.1	+ 5.2	+ 8.7
十月	Oct.	3512	+ 39.1	− 36.1	− 5.9	+ 22.6	+ 0.9	− 18.2	− 1.6	− 13.4
十一月	Nov.	3300	+ 34.1	− 41.6	− 16.9	+ 8.5	+ 6.0	− 20.6	− 3.9	+ 7.2
十二月	Dec.	3471	+ 13.5	+ 18.5	− 9.2	− 2.5	+ 12.4	− 20.0	− 7.7	+ 9.6
全年	Annual	3565	+ 42.3	− 8.5	− 17.3	+ 24.3	+ 5.1	− 25.9	+ 1.8	+ 10.1

CURVES

OF

DIURNAL VARIATION

OF

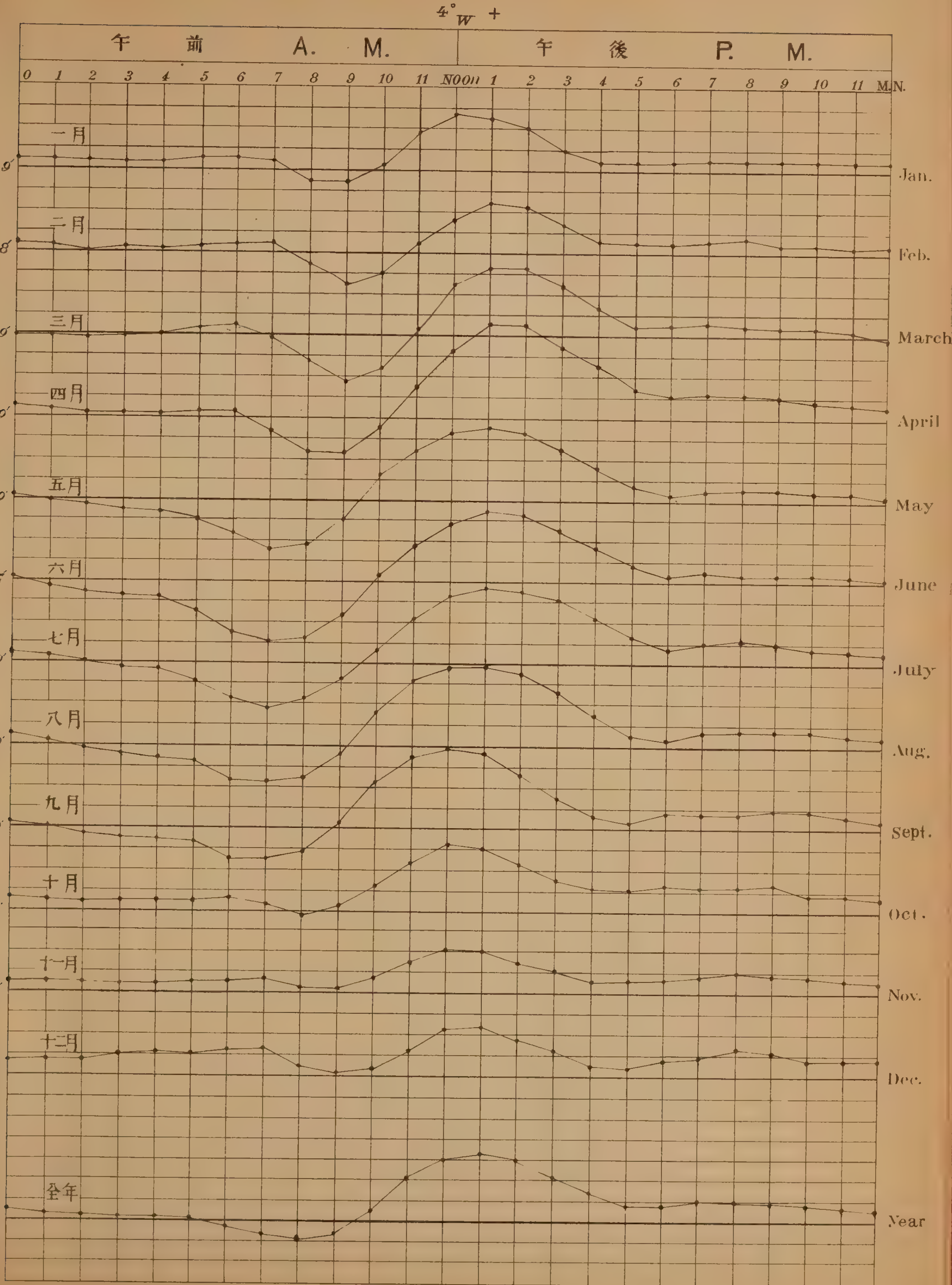
MAGNETIC ELEMENTS

AND

ATMOSPHERIC ELECTRICITY.

一日中偏角ノ變化

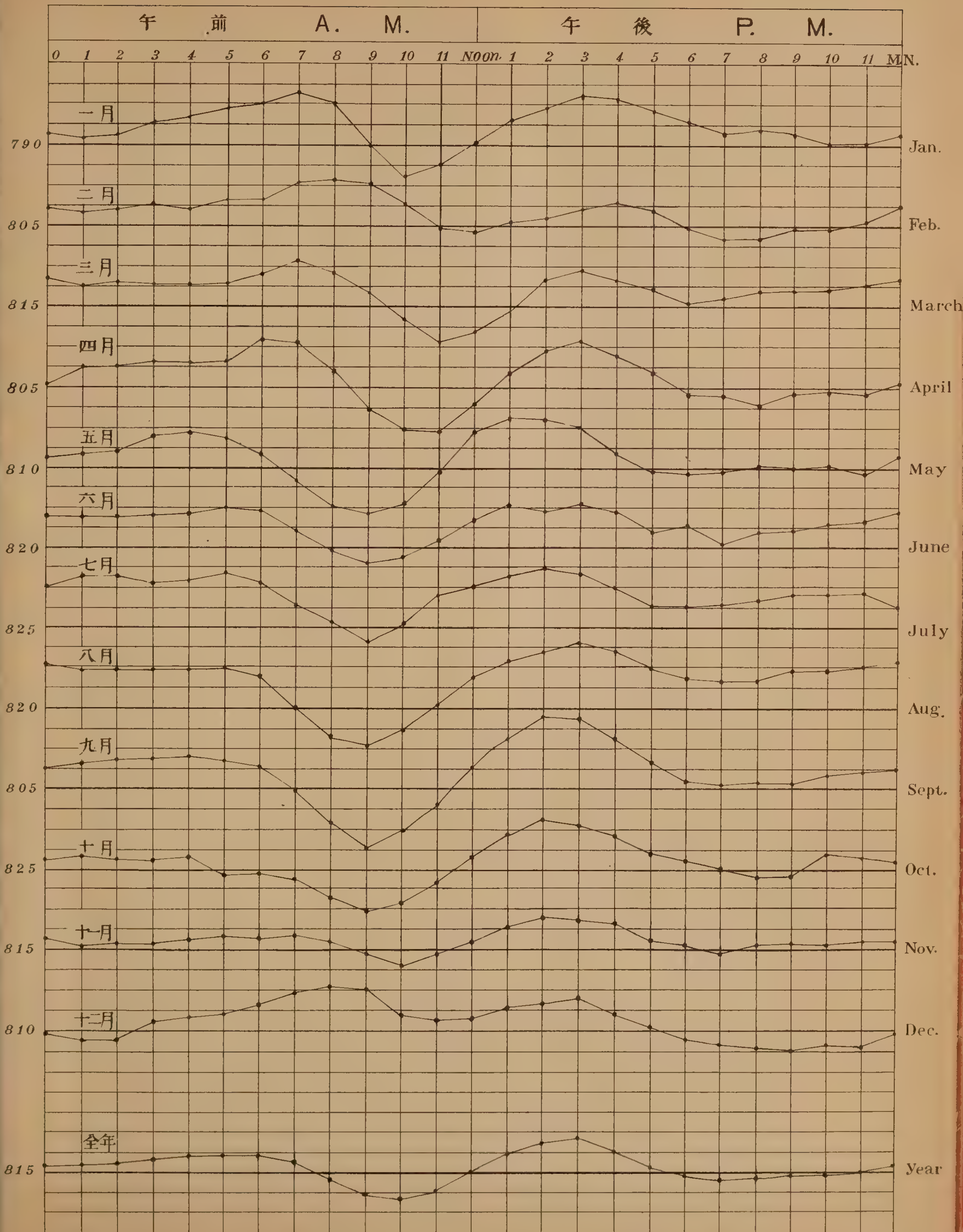
DIURNAL VARIATION OF DECLINATION



1 Div. = 1′

一日中水平磁力ノ変化
DIURNAL VARIATION OF HORIZONTAL INTENSITY

0.29····· +

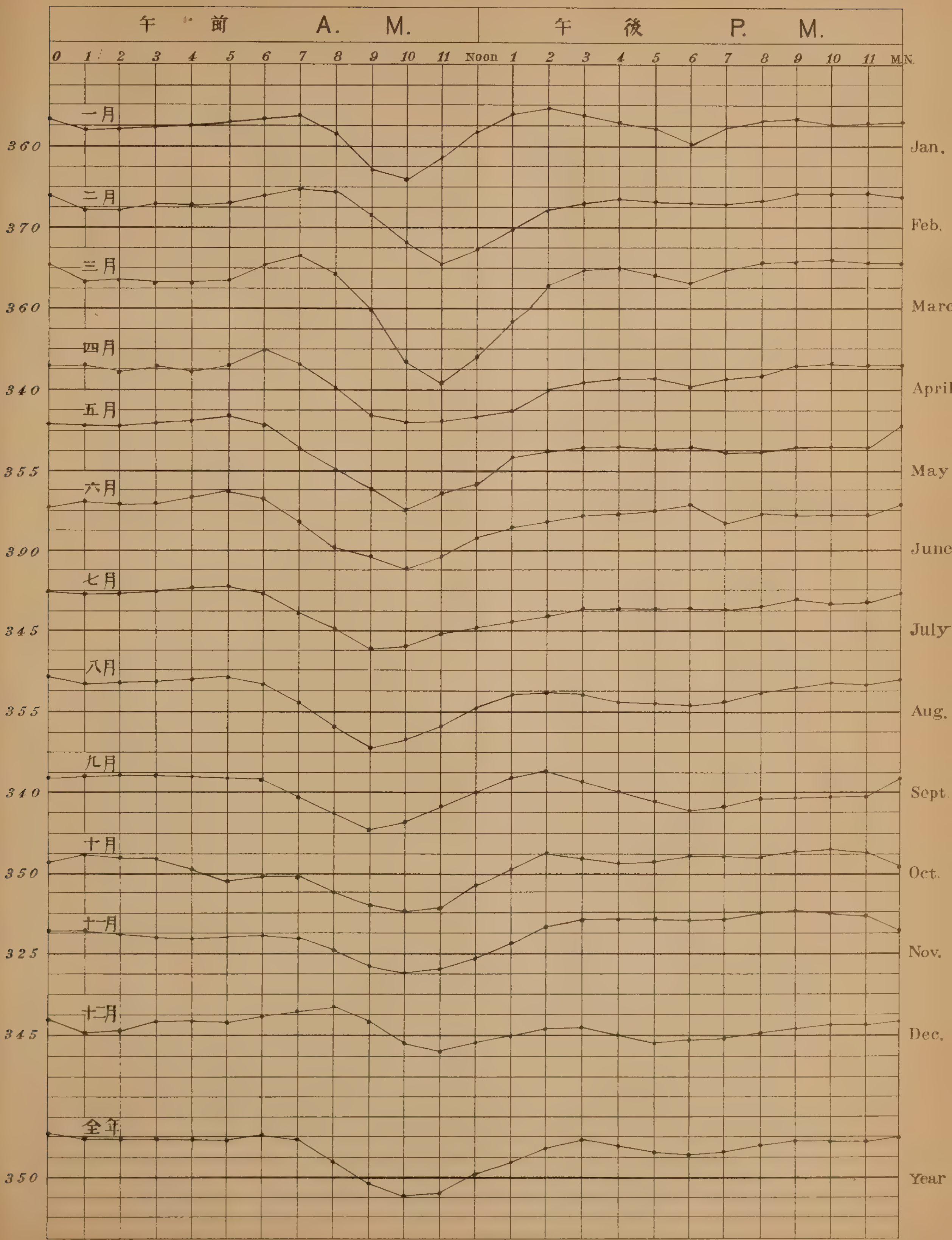


1 Div. = 0.00005 C.G.S. Units.

一日中鉛直磁力ノ變化

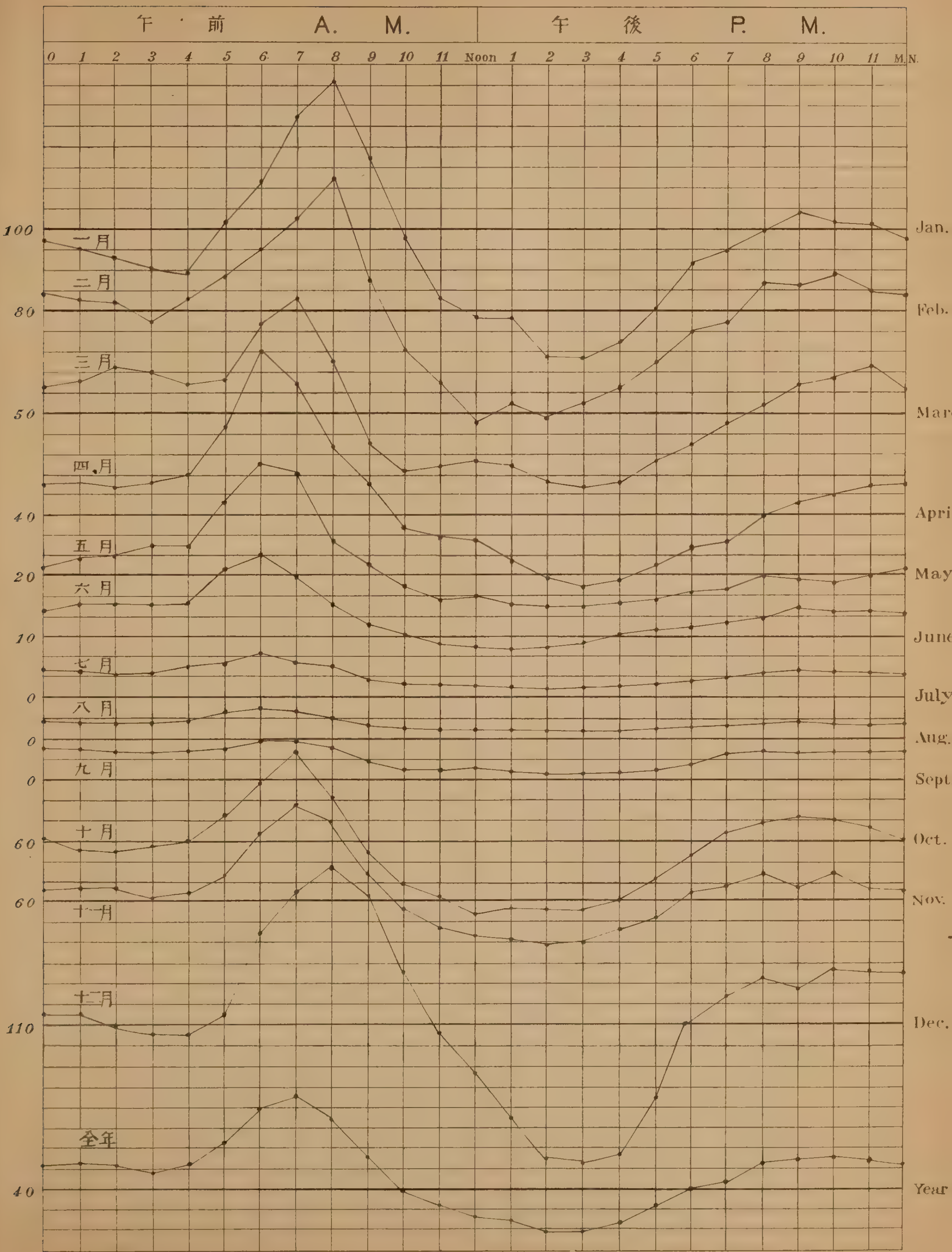
DIURNAL VARIATION OF VERTICAL INTENSITY

0.~~20~~34 ········ +



1 Div. = 0.00005 C.G.S. Units.

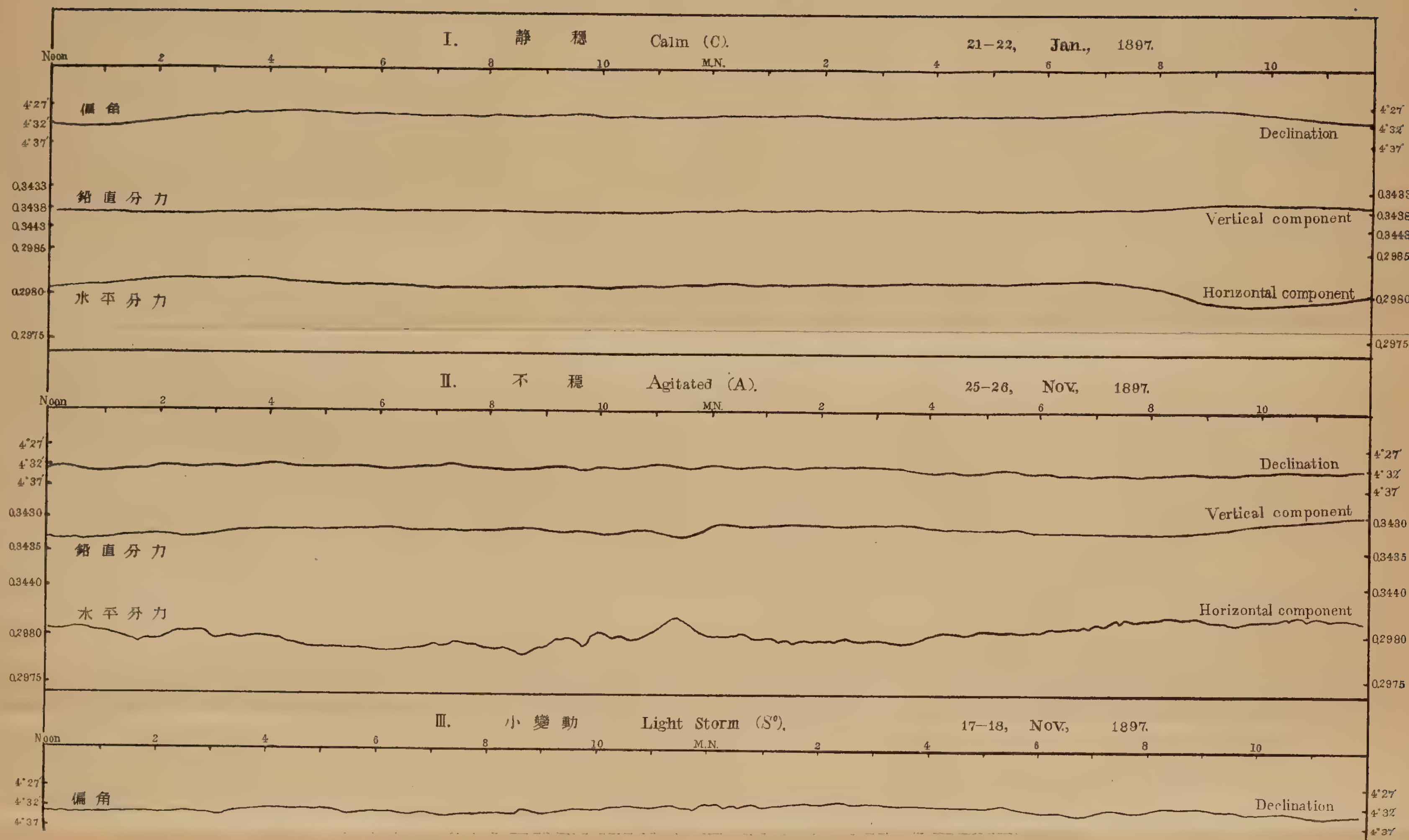
一日中空中電氣ノ變化
DIURNAL VARIATION OF ATMOSPHERIC ELECTRICITY

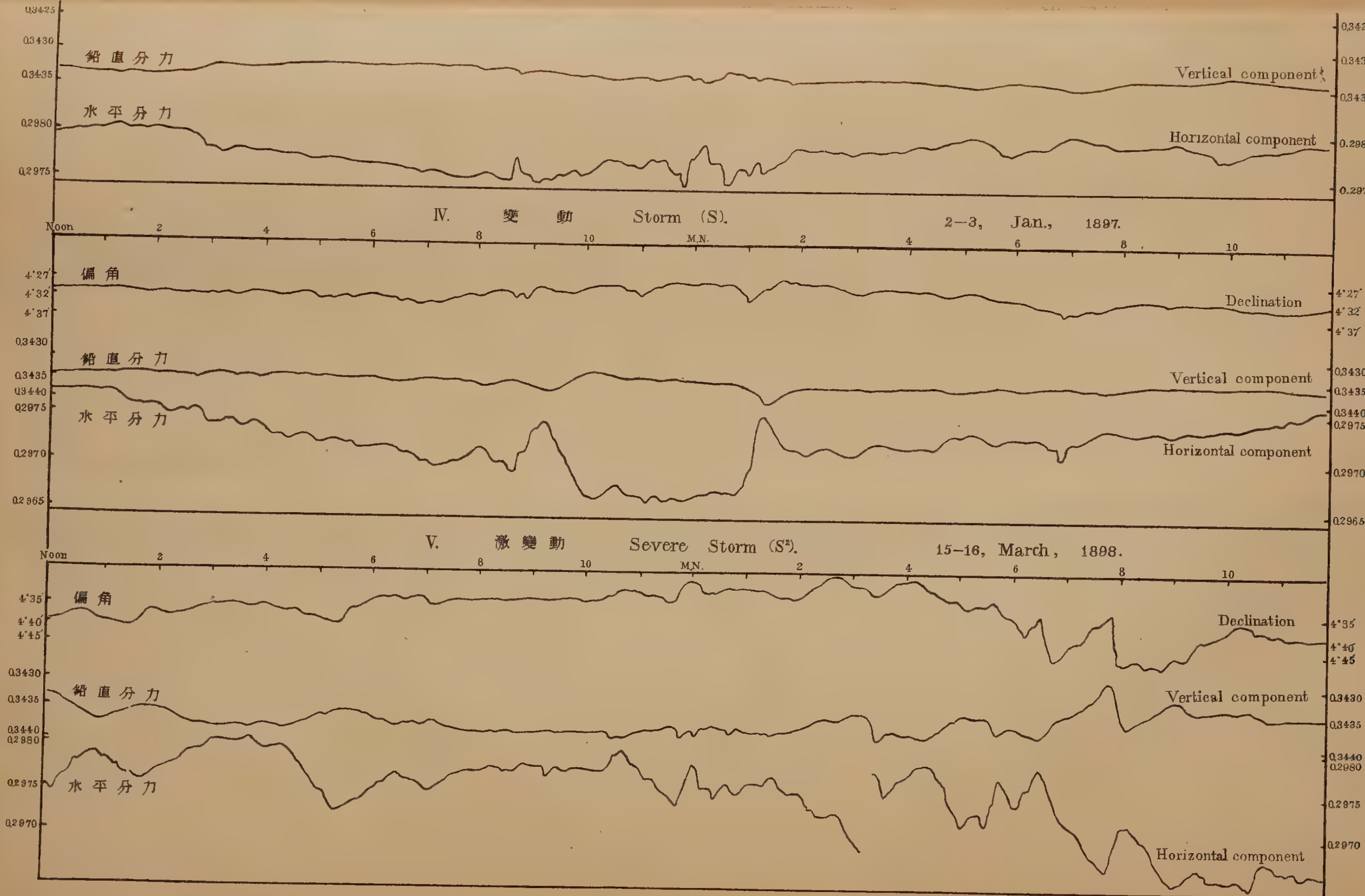


I Div. = 10 Volts.

地球磁氣曲線ノ標式

TYPES OF MAGNETIC CURVES.



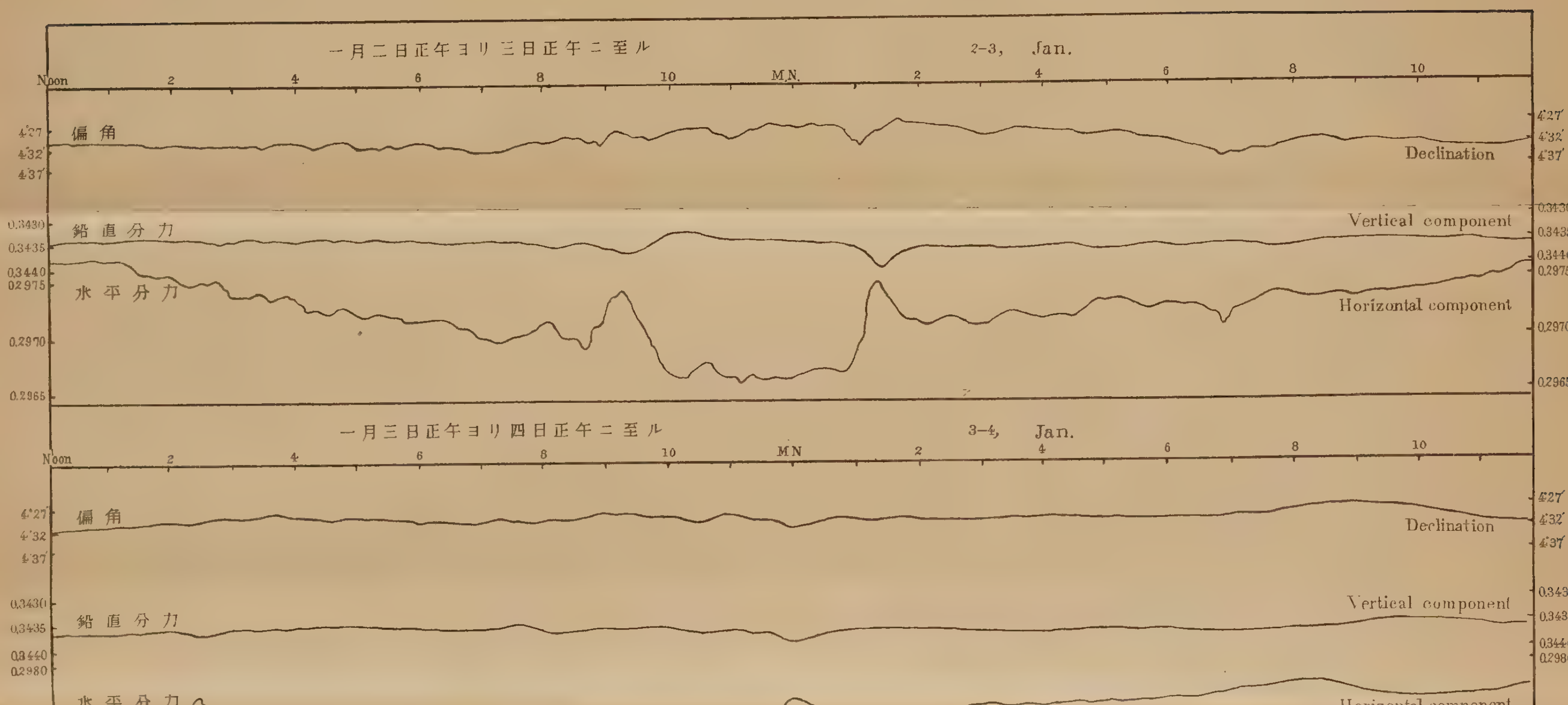


IV. 變動 Storm (S). 2–3, Jan., 1897.
鉛直分力
Vertical component
水平分力
Horizontal component
偏角
Declination
Noon
M.N.
V. 激變動 Severe Storm (S²). 15–16, March, 1898.

明治三十年
磁氣嵐

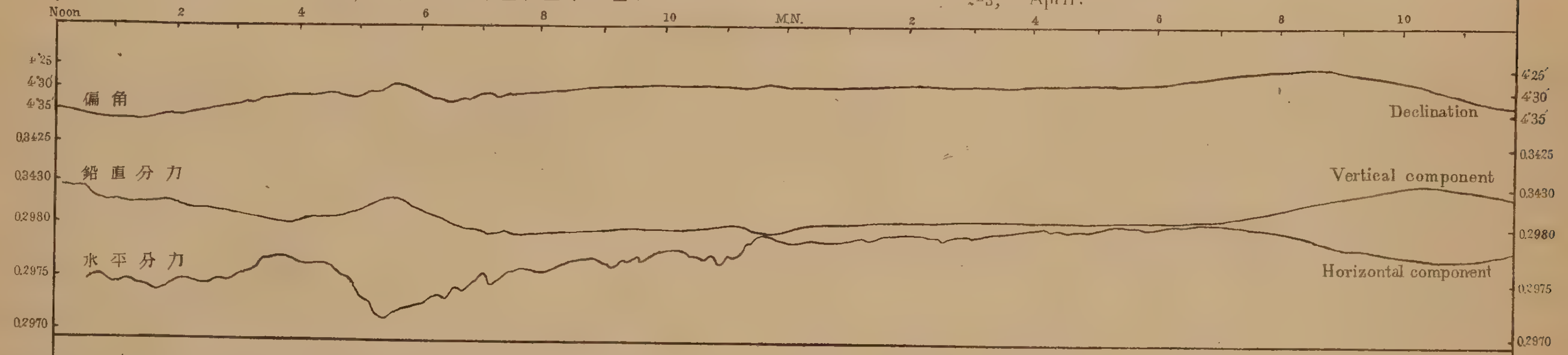
PRINCIPAL MAGNETIC DISTURBANCES

RECORDED AT THE CENTRAL METEOROLOGICAL OBSERVATORY, TOKIO, 1897

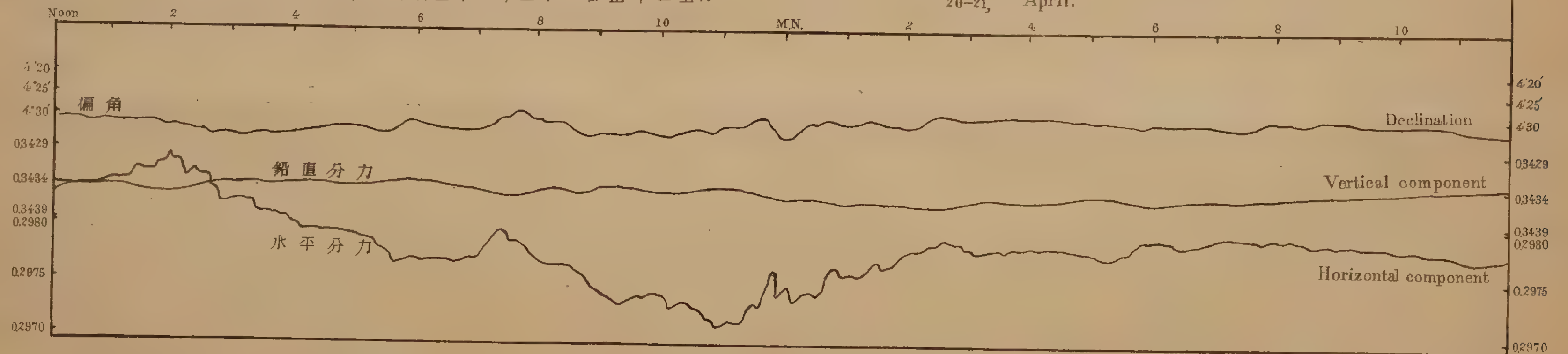




四月二日正午ヨリ三日正午ニ至ル　　2-3, April.



四月二十日正午ヨリ二十一日正午ニ至ル　　20–21, April.

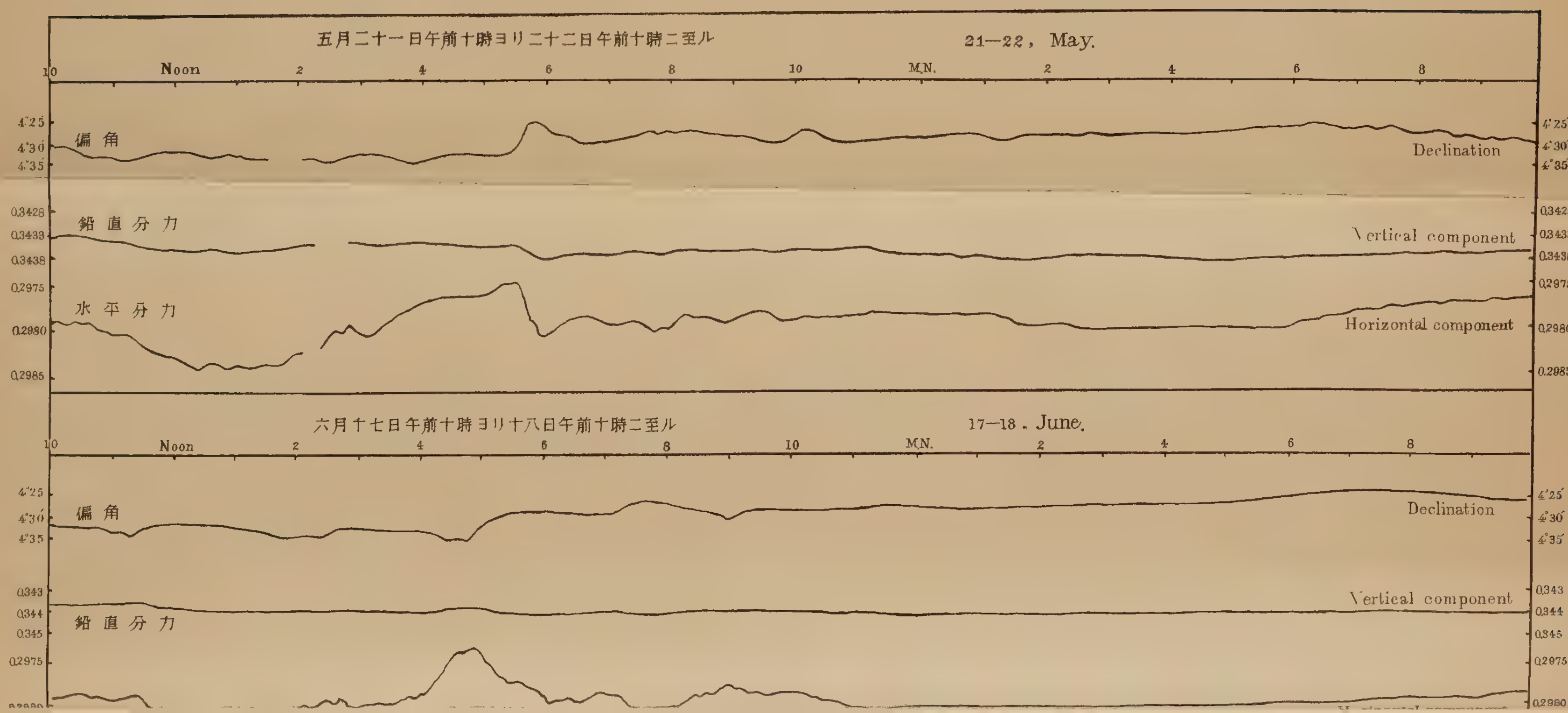


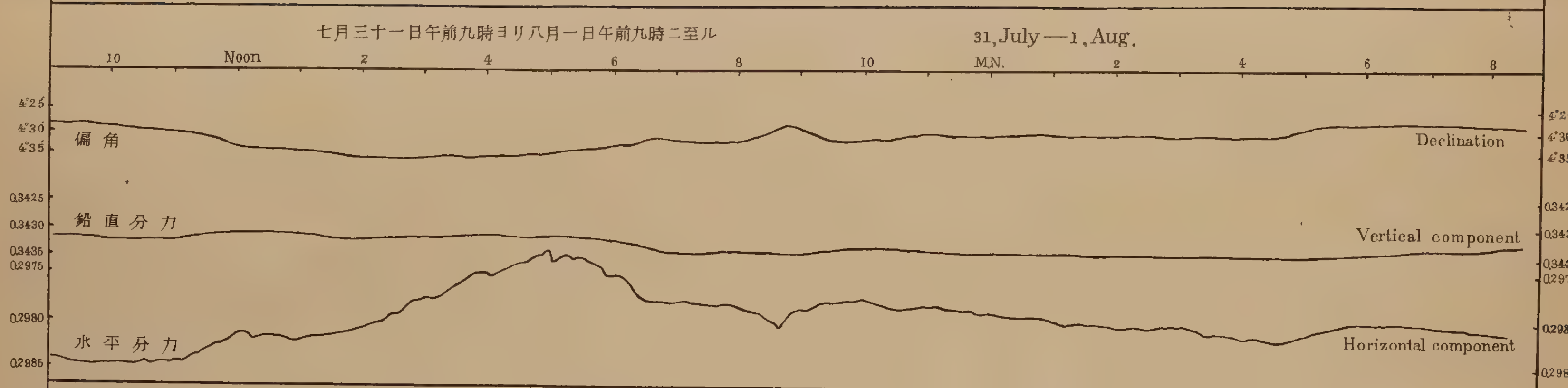
明治三十年

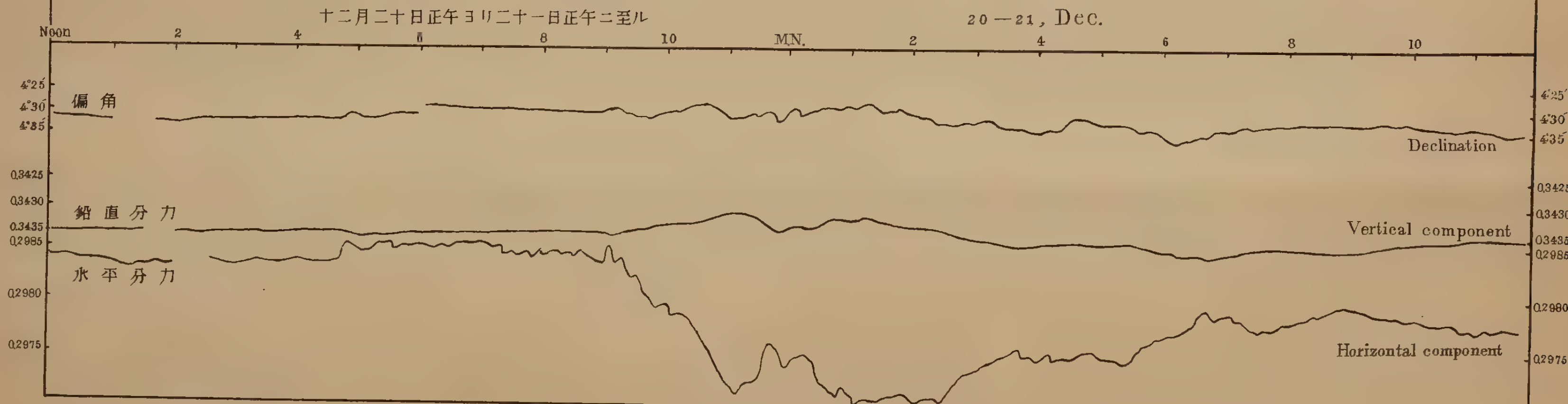
磁氣嵐

PRINCIPAL MAGNETIC DISTURBANCES

RECORDED AT THE CENTRAL METEOROLOGICAL OBSERVATORY, TOKIO, 1897.




七月三十一日午前九時ヨリ八月一日午前九時ニ至ル
31, July — 1, Aug.
10
Noon
2
4
6
8
10
M.N.
2
4
6
8
偏角
Declination
鉛直分力
Vertical component
水平分力
Horizontal component
4°25′
4°30′
4°35′
0.3425
0.3430
0.3435
0.2975
0.2980
0.2985


十二月二十日正午ヨリ二十一日正午ニ至ル
20—21, Dec.
Noon
2
4
6
8
10
M.N.
2
4
6
8
10
偏角
Declination
鉛直分力
Vertical component
水平分力
Horizontal component
4°25′
4°30′
4°35′
0.3425
0.3430
0.3435
0.2985
0.2980
0.2975

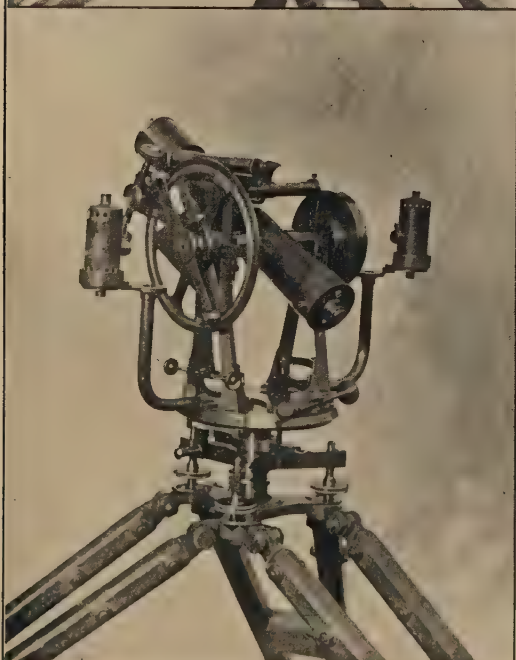
Magnetic Instruments for Absolute Measurement.

Deflection Instrument.

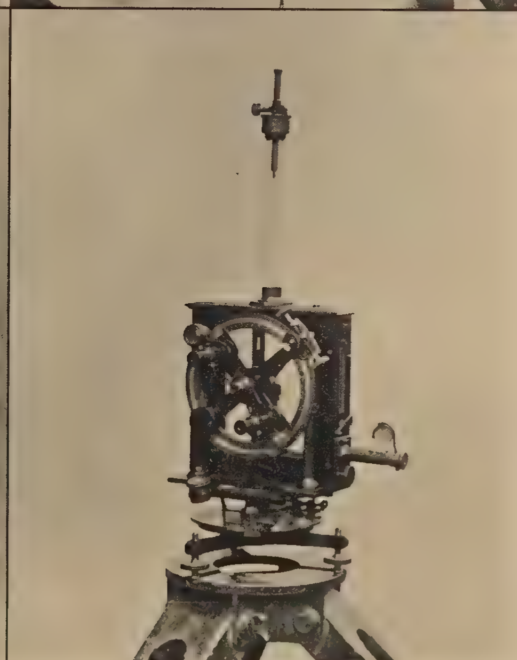


Declinometer.





Theodolite.



Dip and Vibration Instrument.

二月	三、八六
三月	二、九七
四月	三、一三
五月	三、二三
六月	一、七三
七月	一、三六
八月	一、三六
九月	一、二五
十月	一、六一
十一月	二、一三
十二月	二、六九

終リテ尚一言スヘキハ空中電氣ノ曲線ハ一般ニ凹凸ノ甚タシキコトナリ故ニ先ツ平均曲線ヲ畫キ以テ「ポテンシヤル」ヲ測ルヲ常トセリ

明治三十年空中電氣觀測

空中電氣ノ「ポテンシャル」ハトムソン及マスカール自記象限電氣計ニヨリテ之ヲ測定ス今左ニ其構造ノ概略ヲ說明セン

電氣計ハ金屬製ノ箱内ニ在リ箱ノ蓋ニハ直立スル管アリテ一本釣リノ糸ヲ支フ又コレニ三個ノ「エレクトロード」アリテ箱内ノ象限及ヒ針ニ接續ス即チ二個ノ「エレクトロード」ハ象限ノ一對ヅヽト結合セラレ其他端ハ三十乃至五十ノ水「セル」ヨリ成ル電池ノ兩端ニ至リ其電池ノ中部ハ地ニ接續セラル第三ノ「エレクトロード」ハ其先端ニ付着セル白金線ニヨリテ箱内ニアル玻璃瓶内ノ硫酸ニ通ス然ルニ針ノ先端ハ白金線ヨリ成リ是レ亦硫酸中ニ沒入スルカ故ニ此針ハ第三ノ「エレクトロード」ニ通スルモノナリ又扇形ノ金屬片ハ針ニ付着シテ象限内ニアリ各一對ノ象限ハ此扇形片ノ「ポテンシャル」カ陰成ハ陽ナルニヨリテ之ヲ引キ或ハ之ヲ斥ク

空中電氣ヲ集ムルニハサー、ウ井リヤム、トムソン氏ノ水滴器ニヨル自記室ノ隣室ニ銅製ノ桶アリ三個ノ玻璃臺上ニ座シ此臺ハ皆硫酸ヲ入レタル玻璃瓶内ヨリ突出スルモノナリ瓶口ニハ眞鍮ノ蓋アリテ之ヲ蔽フ然レトモ之ヲシテ少シモ瓶ニ觸ル、所ナカラシム是レ電氣ノ漏洩ヲ防クナリ此桶ヨリ長サ二米ノ管西方ニ突出シテ空中ニアリ其先端（地面ヨリノ高サハ一米七トス）ノ小孔ヨリ水迸出シ直チニ細滴トナリテ落下ス斯クノ如クシテ桶ハ管ノ先端ニ於ケル空氣ト同「ポテンシャル」トナルカ故ニ之ヲ前記第三ノ「エレクトロード」ニヨリテ鏡付キノ針ニ通ズルナリ然ラバ空中電氣ノ變化ニ伴ヒ鏡ハ左右ニ廻轉セラル、カ故ニ此鏡面ニ光線ヲ投射セシメ之ヲ時計仕掛ニヨリテ動カサル、寫眞紙上ニ反射セシメ以テ空中電氣變化ノ曲線ヲ得ヘシ但シ零線ハ電氣計前面ニアル玻璃窓ニヨリテ反射セラル、光線ニテ之ヲ書カシムルヲ得ヘシ

濕氣ノ存在スルコトニヨリテ多少零點ノ移動ヲ免レス故ニ日々二回水流ヲ斷チ桶ヲ地面ニツナギ以テ零線ヲ畫カシム又成ルヘクカ、ル誤差ヲ避ケンカ爲メニ器械内ノ硫酸ハ殆ント毎週之ヲ新ニス感度ハ毎週五十「セル」ヨリ成ル電池ニヨリ之ヲ試驗ス其一耗ニ對スル値ヲ各月ニ平均スレハ左ノ如シ

一月　三、四五

午後二時十四分	九、九	三四、九二	三、五三
午後二時四十分	九、三	四〇、二七	四、三三
午後三時十三分	九、一	三九、四四	四、三三
午後三時三十九分	八、九	三八、四七	四、三二
平均			四、一六

コ、ニ實驗中一粍ノ變位ハC.G.S.單位ノ〇、〇〇〇〇七三一九ニ當ルヲ以テ溫度係數ノ絕對値ヲ得ルコト次ノ如シ

$$4.16 \times 0.0000I319 = 0.0003045 \quad (\text{C.G.S.單位ニテ})$$

第四　直接讀取リ器械

其構造全ク自記磁力計ニ異ナルナシ故ニコ、ニ重ネテ贅スルノ要ナシ此器械ハ自記器械ニヨリテ得タル結果ヲ時々吟味スルノ用ニ供セリ

第五　磁氣要素日々變化ノ調和的分析

磁氣要素ノ月平均及年平均ノ毎時値ヲ次式ニテ顯ハシ得ルモノトシ總テノ係數ノ値ヲ算定スルニ其結果ハ別表ニ載スルガ如シ

$$f(t) = p_0 + p_1 \cos t + q_1 \sin t + p_2 \cos 2t + q_2 \sin 2t + p_3 \cos 3t + q_3 \sin 3t + p_4 \cos 4t + q_4 \sin 4t.$$

但シ式中tハ標準時ヲ角度ニテ顯ハシタルモノf(t)ハtノ時刻ニ於ケル磁氣要素ノ平均値ヲ示スモノナリ

今前式ヲ年平均ニ應用シテ得タル計算値ト觀測値トノ差ノ自乘ノ和ヲ求ムルニ左ノ結果ヲ得タリ但シ偏角ニ於テハ分ヲ單位トシ水平磁力及鉛直磁力ニ於テハC.G.S.單位ノ〇、〇〇〇〇〇一ヲ以テ單位トナセリ

偏角	〇、〇七三六
水平磁力	七八九、五〇
鉛直磁力	三三九、五七

午後零時三十三分	八、八	四二、三八	四、八二
午後零時五十七分	八、二	四一、五一	五、〇七
午後一時二十三分	七、七	三九、九七	五、一六
午後一時四十三分	七、三	三八、〇八	五、二九
午後二時十四分	一〇、〇	四三、六八	四、三七
午後二時四十分	九、四	四五、七〇	四、八八
午後三時十三分	九、一	四五、七六	五、〇三
午後三時三十九分	八、九	四五、二三	五、〇八
		平均	四、九五

此實驗中一粍ノ變位ハC'G'S'單位ノ〇、〇〇〇〇〇四一八三ニ當ルヲ以テ温度係數ノ絶對値ヲ得ルコト次ノ如シ

$$4.95 \times 0.00004183 = 0.0002073 \quad (\text{C. G. S. 單位ニテ})$$

鉛直磁力計温度係數ノ測定

時刻	温度ノ差(攝氏)	變位(粍)	攝氏一度ニ對スル變位(粍)
午前九時十八分	〇、〇	〇、〇〇	——
午前十一時八分	八、六	三三、〇三	三、八四
午前十一時三十三分	八、四	三三、五三	三、九九
午後零時一分	八、三	三二、四四	三、九一
午後零時三十三分	八、六	三七、二七	四、三四
午後零時五十七分	八、四	三七、一七	四、四二
午後一時二十三分	八、一	三五、五七	四、三九
午後一時四十三分	七、六	三三、四二	四、四〇

九月	○、○○○○六六二	○、○○○一二六八
十月	○、○○○○六○○	○、○○○○九七七
十一月	○、○○○○六○五	○、○○○○七九三
十二月	○、○○○○六○四	○、○○○一○二○

丙　水平及鉛直磁力計ノ温度係數

自記磁力計室ハ温度不變ナル能ハズ往々ニシテ一日ノ較差殆ント攝氏一度ニ及ブコトアリ而シテ温度ノ增加スルアレハ水平及鉛直磁力計ニ於テハ恰モ二分力ノ減衰セルト同結果ヲ顯ハスヲ以テ先ツ此温度係數ヲ測定シ以テ温度ニ就キテノ補正ヲ爲スコト必要ナリ乃チ三十一年六月コレカ測定ヲナセリ先ツ六個ノ摺鉢ヲ室内ニ分布シコレニテ炭ヲ燃シ以テ室内ヲ暖メタリ而シテ成ルヘク一定ノ温度ヲ保ツコト甚タ必要ナルカ故ニ自記寒暖計ヲ置キ其ノ畫ク所ノ曲線ニ注視シ手ツカラ火勢ヲ斟酌セリ同時ニ又西室ニアル直接讀取リ器械ニヨリテ磁力ヲ觀測シ其度毎ニ東室温度ノ讀取リヲナセリ温度ハ水平磁力計鉛直磁力計ニ付キタル寒暖計及自記寒暖計ノ示ス所ニヨレリ而シテ此三箇同時ノ讀取リハ其差攝氏○、四度ヲ超ユルコトナク又實驗中温度ノ變化ハ殆ント二度餘ナリキ實驗中磁力ノ實際ニ變化スルハ直接讀取リ器械ニヨリテ知ルコトヲ得ルヲ以テ此部分ヲ除去スルトキハ眞ニ温度ノ變化ノミニヨリテ起レル變位ヲ見出スコトヲ得ヘク隨テ温度係數ヲ算定セルコト左ノ如シ

水平磁力計温度係數ノ測定

時刻	温度(攝氏)	變位(粍)	攝氏一度ニ對スル變位(粍)
午前九時十分	○、○	○○、○	—
午前十一時八分	九○	四二、五一	四、七三
午前十一時三十三分	八三	四二、四三	五、一一
午後零時一分	八、四	四一、三八	四、九三

偏角　或ル一定ノ小角タケ偏角計箱ヲ廻轉スルトキハ固定鏡ヨリ反射スル光線ハ寫眞紙面ニ或ル變位ヲ生スヘシ、コレヨリ曲線ニ於ケル縱線若干巨離ニ對スル角度ノ値ヲ見出スコトヲ得ヘシ而シテ其値ハ一粍ニ對シテ一分四七ナリトス但シ系ノ捩レノ影響ハ甚タ小ニシテ實際上零ト見做ス

水平磁力　偏角計後部ニ或ル磁石ヲ偏角計磁力ト同高ニシテ之ヲ水平ニ置キ始メハ其北極ヲ東ニ後ニハ之ヲ西ニ置キ偏角變位ノ和ノ半ヲαトセヨ次ニ水平磁力計ノ側部ニ此磁石ヲ持チ來ラシ磁力計磁石ト同高ニシ初メハ其北極ヲ北方ニ後ニハ南方ニ向ケ之ニテ生ズル變位ノ和ノ半ヲnトセハ左式ヲ得ヘシ

$$\triangle H = \frac{H \tan\alpha}{n}$$

コヽニHハ水平磁力ヲ顯ハシ△Hハ單位ノ變位ニ對スル其變リヲ示ス

鉛直磁力　前ニ使用セル磁石ヲ鉛直磁力計ノ後部ニ置キ始メ其北極ヲ上部ニ後ニハ之ヲ下部ニ置キ以テ生シタル變位ノ和ノ半ヲmトセハ左式ヲ得ヘシ

$$\triangle Z = \frac{Z \tan\alpha \cot I}{m}$$

コヽニIハ傾角Zハ鉛直磁力ヲ顯ハシ△Zハ單位ノ變位ニ對スルZノ變リヲ示ス

今△H及△Zカ一粍ノ變位ニ對スル値ヲ各月ニ平均スレハ左ノ如シ

	△H（C、G、S、單位ニテ）	△Z（C、G、S、單位ニテ）
一月	○、○○○○五九一	○、○○○一三三○
二月	○、○○○○六○九	○、○○○一二四九
三月	○、○○○○五七二	○、○○○○九○二
四月	○、○○○○五八二	○、○○○○八二○
五月	○、○○○○六三四	○、○○○一三三二
六月	○、○○○○六九○	○、○○○二三九○
七月	○、○○○○六九一	○、○○○一三○四
八月	○、○○○○六七二	○、○○○一八二七

會堂内搭頂ノ方位ヲ定メ置キ子午線ノ讀ミハ此方位ノ讀ミヨリ算出ス

第三　磁氣要素自記器械

磁氣要素ノ自記ハマスカール氏自記磁力計ニ由ル今其装置及推算法ノ概略ヲ述ヘン

甲　器械ノ装置

偏角計　偏角計ハ金屬箱内ニ在リ箱ノ上部ヨリ直立スル管アリ其上端ヨリ一本ノ絹糸ヲ下ケ之ニ磁石ヲ懸垂ス磁石ニハ其軸ニ直角ニ付着スル鏡アリ又箱ノ底面ニ固定セラル、鏡ノ直立スルアリカクテ此二鏡面ニ投射スル光線ハ反射セラレ時計仕掛ケニテ動サル、寫眞紙上ニ落チ一ハ磁力方向變化ノ曲線ヲ書キ一ハ定線ヲ書ク

水平磁力計　其構造偏角計ト大差ナシ但シ此場合ニ於テハ磁石軸ニ平行ノ鏡ヲ付シ之ヲ二本ノ絹糸ニテ懸垂シ水平分力及糸ノ捩レニ依テ起ル二偶力ノ作用ノ下ニ磁軸ヲシテ略ホ東西ノ方向ニ在ラシム其感度ハ二箇ノ懸垂點ノ距離ヲ伸縮シ以テ適當ニナスコトヲ得斯クシテコノ鏡面ヨリ反射セラレタル光線ハ水平磁力變化ノ曲線ヲ書クヘシ

鉛直磁力計　是レ一ノ磁石天秤ニシテ其中央部ニ孔アリ此孔内ニアル刄ニヨリテ磁石ハ碼碯板上ニ安坐セリ而シテ之ニ付着セル指針ニヨリテ其重心ノ位置ヲ適當ノ所ニ移シ以テ鉛直磁力及重力ニ依テ起ル二偶力ヲ平衡セシメ以テ磁石ハ略ホ水平ノ位置ニ在ラシム其感度ハ水平及鉛直軸上ニ移動スルヲ得ヘキ二箇ノ重ニ依リ自在ニ整理スルコトヲ得此全部金屬箱内ニ置カレ二箇ノ鏡アリ共ニ水平ノ方向ニ在リテ一ハ箱ニ一ハ磁石ニ固定セラル箱蓋中央部ニハ孔穴アリコレニ二等邊直角「プリズム」ヲ置キ其一面ハ水平ニ一面ハ鉛直ノ方向ニ在ラシム故ニ「プリズム」ノ鉛直面ニ投射セル光線ハ鏡面上ニ落チ再ヒ此所ニ反射セラレソレニ由テ鉛直磁力變化ノ曲線及定線ヲ書カシムルヲ得

乙　推算法

ニ下部ハ經緯儀付屬望遠鏡及ヒ偏角計「コイル」ノ心棒ト等曲率ヲ有スY臺ノ中間ニ於テ棒ハ楕圓狀ノ輪ヲナシソレヨリ磁力計突出ス而シテ此輪ノ前面下部ニハ半圓形ノ溝アリ以テ小望遠鏡ニ依リ磁石付屬ノ鏡ヲ視ルニ障碍ナカラシム二箇ノV溝ニハ各二個ノ「止メ」アリ「フレ」ノ磁石ハ此溝中ニ置カル此二個ノ「止メ」ハ磁石ヲ揚クルコトナク溝内一ノ「止メ」ヨリ他ノ「止メ」ニ迄ラシ以テ中心ヨリ二距離ニ在ルコトヲ得セシム此「止メ」ハ二距離ノ比最モ適當ナル樣ニ定メタルモノナリ

此器械ハ正弦法、正切法ノ何レニモ適ス然レトモ前者ニ依ルヲ便ナリトス而シテ之ヲ使用スルニハ先ツ磁力計臺ヲY臺ニ固定シ經緯儀底面トハ關係ナカラシム其後ノ方法ハ全クキィウ形器械ニ於ケルカ如シ棒ノ温度ハ第二ノ「止メ」ノ兩側ニ在ル寒暖計二箇ヲ以テ計ル磁石ヲV溝内ニテ動カストキハ小ナル刷毛ヲ以テ磁石面幷ニ溝内ノ塵埃ヲ拂フヲ可トス最終ノ「フレ」整理セラレタル時「クロノメートル」ノ時ヲ讀ム振動實驗ハ便宜ニ從ヒ常ニ「フレ」實驗ノ前ニ行フノ慣習ナレハ其初記時刻ニ依テ實驗ノ始ノ時刻ヲ知ルヲ得ヘシフレ」及ヒ振動實驗ニヨリ算出セラレタル水平磁力ハ則チ此二時刻ノ平均時刻ニ對スル其値ナリトス

振動實驗ハキィウ形器械ニ於ケルモノト略ホ等シキ振動箱中ニ於テ之ヲナスコレ他ノ三脚上ニ安置スルカ故ニ磁力計臺ハ天體觀測ヲナスニアラサレハ之ヲ取リ去ルノ要ナシ磁石ハヨク振レヲ除去セル絹糸ノ先端ニ付ケタル二箇ノ輪ニ掛ケ水平ニ之ヲ懸垂ス次ニ半度位ノ水平振動ヲ磁石ニ與ヘ之ヲ望遠鏡ニテ觀測ス觀測者ハ其中央線カ目盛リノ中央ニ來リタルトキ合圖ヲナシ記者ハ或ル距離ニ在テ其時刻ヲ記入ス

温度ハ箱内ニ在ル寒暖計ニ依リ終始共ニ觀測シ其平均ヲ以テ振動實驗中ノ温度トナス

水平分力ヲ算定スルニハ總テ必要ナル補正ヲナス即チ糸ノ捩レ、振動弧ノ補正ハ通常ノ如ク之ヲ施シ時ハ之ヲ平均太陽時ノ秒位ニ變更ス此他感應、剛鐵、磁石、V溝眞鍮棒ノ膨脹、振動實驗及「フレ」ノ實驗ニ於ケル温度差異ノ補正等皆之ヲ施ス振動實驗ハ常ニ「フレ」ノ實驗前ニ之ヲ行フ其第一振動時ヨリ最終「フレ」ノ實驗マテノ時間ハ通例二十分程トス

傾角　傾角ノ觀測ハカセラ製傾角計第十七號ニ依テ之ヲ行フ針ノ磁石ハ電磁「コイル」ヲ用キテ反覆ス一ノ全觀測ヲナスニハ是レ又二十分許ヲ要ス

子午線ハ北極附近ノ恒星或ハ太陽ノ觀測ニ依リ時々測定スコレニ依テ十三四丁ノ距離ニアルニコライ教

「コイル」ノ上下面ノ中央部ニハ穴ヲ穿チ以テ磁力計ヲシテ之ヲ通過シ直立スルヲ得セシム「コイル」ヲ整理スルニハ次ノ如ク行フベシ先ツ臺及ビ磁力計ヲ經緯儀上ニ安置シ「コイル」ノ心棒ヲY臺ニ載セ此心棒內ノ空虛ヨリ自由ニ懸垂セラレタル鏡ヲ横ニ見Y臺ヲ畧ホ東西ノ位置ニ在ラシム斯クシテ「コイル」ヲ水平ニ置キ其兩端ヲ南北ニ向ハシメ磁力計ノ中心ヲ直ホシ目盛リ付キノ小望遠鏡及ヒ「ラムプ」ヲ適當ノ塲所ニ置クベシ磁力計臺及ビ其付屬物ハ經緯儀底面ニ固定シ之ヲY臺ト無關係ナラシム隨テ「コイル」ハ全ク他物トハ獨立ニ廻轉スルヲ得磁力計臺ハ適當ニ整理シ目盛リアル數字中或ル便宜ノモノヲ撰ミ磁石ニ付着セル鏡面ヨリ反射セシメ之ヲシテ望遠鏡ノ十文字線ト合一セシムベシ是ニ於テ總テノ用意全ク終ル

次ニ「コイル」ヲ一ノ抵抗箱ニ接續シ以テ乾電池ノ輪道內ニ在ラシム蓋シ抵抗箱ノ兩端ハ電池ノ兩極ニ連續セラレ自在ニ電流ノ方向ヲ變スルコトヲ得始メ「コイル」內ノ電流ニ由テ起ル磁塲ヲシテ地磁氣ノ磁塲ト大抵同方向ニアラシメヨ、磁石ノ急振スルハ容易ニ其然ルヲ示スベシ此塲合ニ目盛ノ反射像ハ一般ニ移動スルカ故ニ電流ヲ通シツ、「コイル」ノ方位ヲ變シテサキノ數字ヲシテ再ヒ十文字線ト合セシムベシ此間磁力計及ヒ望遠鏡ハ全ク固定セラル、カ故ニ之ニ由テ磁力方向ノ大畧ヲ知ルヲ得次ニ電流ノ方向ヲ變スレハ目盛リノ零ノ位置ハ靜カニ十文字線ノ一方ニ移ルヘシ依テ抵抗ヲ適當ニ入レ磁石振動時ヲシテ地球磁力ノミノ塲合ニ於ケル振動時ノ三四倍ナラシメ而シテ再ヒ「コイル」ノ方位ヲ變シサキノ數字ヲシテ十文字線ニ歸ラシム次ニ電流ヲ斷ツモ目盛リノ像移動スルコトナケレハ「コイル」ノ磁軸ハ磁氣子午線內ニ在ルヲ證ス乃チ經緯儀ノ讀ミ取ヲナサハ其方位ヲ知ルヲ得ン次ニ「コイル」ヲ東西ノ方向ニ於テ全ク反對セシメテ同樣ノ事ヲ行ヒ尙ホ「コイル」上下ノ方向ヲ逆ニシ同樣二ケノ讀ミヲナシ都合四回ノ讀ミノ平均ヲ取ル是レ其終始時刻ノ平均時ニ於ケル偏角ヲ與フベシ斯クスルトキハ「コイル」ノ中心ニ於ケル磁氣指力線カ心棒ノ軸トナス角若シ直角ヨリ少シク異ナルコトアルモ又ハ「コイル」ノ中心ト磁石ノ中心ト多少合一セサルモ此等ニヨリテ生スル誤差ハ全ク打消サル、ナリ通常此全觀測ヲナスニハ四五分ニテ足レリ

水平磁力　水平磁力ノ測定ニハ偏角計ヲ除去シ其代リニ「フレ」ノ棒ヲ置カサルベカラス此棒ハ眞鍮製ノモノニシテ其上面兩側部ニ各一箇ノV形ノ溝ヲ備フ棒ノY臺ニ在ルヘキ部分ハ半圓柱狀ニシテ上面ハ平カ

明治三十年磁力觀測

第一　磁力觀測所

磁力觀測所ハ中央氣象臺內ニ在リ海拔二十一米ニシテ東經百三十九度四十五分北緯三十五度四十一分ニ位ス明治二十三年創メテ當觀測所ノ設立アリ尋テ三十年七月之カ再建ヲナセリ家屋ハ木造ヨリ成リ總テ鐵器ヲ用ヒサランコトニ注意シ釘ノ如キ皆銅製ノモノヲ採用セリ觀測室ハ地下ニアリテ南北ノ方向ニ於ケル階段ニヨリテ東西ノ二室ニ分タレ東部ニハ自記磁力計西部ニハ直接讀取リ器械ヲ据付ケタリ

第二　磁氣要素絕對値ノ測定

絕對値測定ハ每月兩三日之ヲ行ヒ水平分力及ヒ傾角(伏角)ハ通例三四回之ヲ測定ス偏角(方位角)ハ數次之ヲ觀測シ其一日中ノ變化ヲ知了スルニ足ラシム而シテ偏角及ヒ水平分力ノ測定ニハ田中舘教授ノ新案ニ係ル器械ヲ用ユ是レ「プロシーディングス、オブ、ゼ、ローヤル、ソサイティー、オブ、エヂンバラ」(千八百八十四年—千八百八十六年)及ヒ帝國大學紀要(卷ノ二、第三)教授ノ論文ニ載セテ詳ナリ依テ今重モニ此等ノ論文ヲ拔萃シテ其構造及ヒ觀測方法ノ概略ヲ說明セン

偏角　偏角計ハ通常天體觀測ニ使用スル經緯儀上ニ安置ス磁力計臺ハ三脚ニテ經緯儀底面ニ附着セラレ其臺ノ中央ヨリ下部ニ突出セル螺旋ニ由リ隨意ニ經緯儀底面ニ或ハ其Y臺ニ固定スルヲ得鏡付キノ望遠鏡及ヒ「ラムプ」之ニ備付ケラル

磁力計箱ハ此臺上ニ置カレ其上部ニ四箇ノ螺旋アリテ水平ヲ直ホシ又臺ノ鉛直側部ニ在ル四箇ノ螺旋ニテ中心ヲ直ホスコトヲ得磁石ハ小ナル內空圓柱狀ノモノニシテ之ニ直角ニ一ノ鏡ヲ付セリ此鏡及ヒ磁石ハ「アルミニユム」ノ棒ニ着ケラレ棒ノ下端廣クシテ必要ノ塲合ニハ箱ノ下部ニアル小ナル萬力ニ由リ之ヲ安全ニ咬ヘ置クコトヲ得而シテ磁石ハ蜘蛛ノ巢ヲ以テ懸垂ス

此偏角計ノ特相トモ云フヘキハ銅製ノ框ニ纏付セル「コイル」ニシテ其中央部ニハ空所アリ其側面ノ中央ヨリ「コイル」ノ軸ニ直角ニ一箇ノ心棒突出ス此心棒ハ內空ニシテ經緯儀付屬望遠鏡ノ廻轉軸ト同直經ヲ有ス

明治三十五年二月刊行

明治三十年

中央氣象臺年報

第二編

己ノ部　地磁氣及空中電氣報告